SERVICE MANUAL ST530/ST530L

marantz®

model ST530/ST530L

Stereophonic Tuner

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:

Parts can be ordered either by mail or by telex. In both cases, MARANTZ part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

MARANTZ S.A.
EUROPEAN PARTS DEPARTMENT
2, Avenue Léopold III
B-7120 PERONNES-lez-BINCHE
BELGIUM
TWX: 57589 SEPLT B

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
Phone: 1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

PARTS ORDERING:

Parts may be ordered from the following addresses:

EUROPE

MARANTZ S.A.
European Parts Department
2, Avenue Léopold III
B-7120 Péronnes-lez-Binche
Belgium
Telex: 57589

MARANTZ GERMANY GMBH
Max Planckstrasse, 22
6072 DREIEICH 1
West Germany
Telex: 4185316

MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

MARANTZ DENMARK
Bregnerødvej 132b
3460 Birkerød
Denmark
Telex: 39137

MARANTZ GMBH AUSTRIA
Wiedner Hauptstrasse 98
1050 Wien
Austria
Telex: 113583

MARANTZ S.A.
326 Avenue Louise Bte 32
1050 Brussels
Belgium
Telex: 26602

MARANTZ NORSKE A.S.
Refstadalleen 13
Oslo 5
Norway
Telex: 19659

MARANTZ AUDIO U.K. LTD.
Unit 15/16
Saxon Way Industrial Estate
Moor Lane
Harmondsworth UB7 OLW
Great Britain
Telex: 935196

MARANTZ BELGIUM
45 Rue Auguste Van Zande
1080 Brussels
Belgium

MARANTZ SVENSKA A.B.
Svartviksvangen 56
Traneberg - Box 12016
16112 Bromma
Sweden
Telex: 13449

AUSTRALIA

MARANTZ AUSTRALIA PTY., LTD.
32 Cross Street
Brookvale, N.S.W. 2100
Australia
Telex: 24121

U.S.A.

MARANTZ COMPANY, INC.
National Service Dept.
P.O. Box 577
Chatsworth, CA 91311
U.S.A.
Telex: 4720284

CANADA

SUPERSCOPE CANADA, LTD.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

JAPAN

MARANTZ JAPAN, INC.
35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan
Telex: 22878

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

> In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

NOTE—FOR U.S.A. ONLY

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If, for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

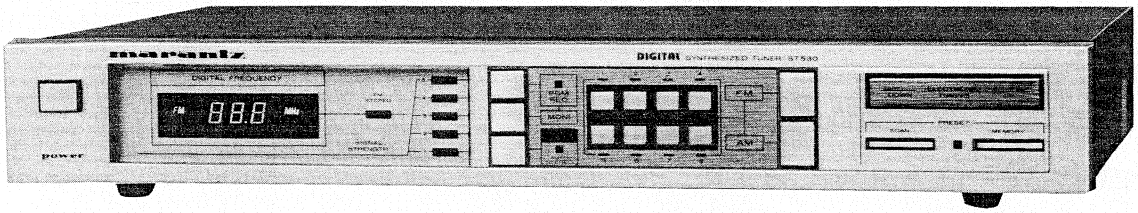
Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from SUPERSCOPE NATIONAL PARTS DEPARTMENT.

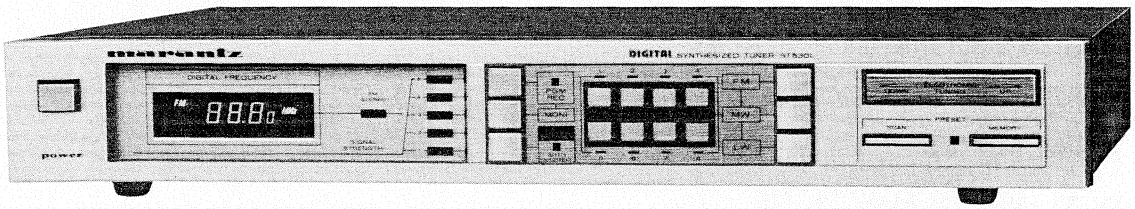
marantz®

TABLE OF CONTENTS

SECTION		PAGE
INTRODUCTION		1
1.	SHOCK, FIRE HAZARD SERVICE TEST	1
2.	P.W. BOARDS	1
3.	TEST EQUIPMENT REQUIRED FOR SERVICING	2
4.	TUNER ALIGNMENT PROCEDURES	2
4.1	FM Alignment Procedures	2
4.2	Muting Level Alignment	3
4.3	Multiplex Alignment Procedures	3
4.4	AM Alignment Procedures	3
5.	TEST POINTS AND ALIGNMENT POINTS	4
6.	μPD1704C-544 (Q501)	5
7.	OUTLINE OF FUNCTIONS	6
8.	CONFIGURATION OF KEY MATRIX	7
9.	DESCRIPTION OF KEY MATRIX	7
10.	DIODE MATRIX INITIAL SETTINGS	8
11.	INDICATORS	8
12.	VOLTAGE CONVERSION	10
13.	BLOCK DIAGRAM	11
14.	DIAGRAM AND COMPONENT LOCATIONS	12
14.1	Tuner/Power/Synthesizer Assembly (P100) Schematic Diagram and Component Locations	12
14.2	Disply Assembly (PR00) Schematic Diagram and Component Locations	17
14.3	Power Switch Assembly (PS00) Schematic Diagram and Component Locations	17
14.4	Tach Switch/Preset Indicator Assembly (PT00) Schematic Diagram and Component Locations	17
14.5	Signal Strength Meter Assembly (PX00) Schemtic Diagram and Component Locations	18
15.	EXPLODED VIEW AND PARTS LIST	19
16.	ELECTRICAL PARTS LIST	24
17.	TECHNICAL SPECIFICATIONS	29
18.	SCHEMATIC DIAGRAM	30

MODEL ST530/ST530L STEREOPHONIC TUNER





INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model ST530/ST530L Stereophonic Tuner.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

1. SHOCK, FIRE HAZARD SERVICE TEST

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verfied before return to user/customer.

Ref. UL Standard No. 1270. Para. 66. 3. D (Mandatory Test after servicing Electrical Appliances, effective 7-1-83).

2. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model ST530/ST530L consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. **Tuner/Power/ Synthesizer . . . . . mounted on P.W. Board P100**
2. **Display . . . . . mounted on P.W. Board PR00**
3. **Power Switch . . . . . mounted on P.W. Board PS00**
4. **Tach Switch/ Preset Indicator . . . . . mounted on P.W. Board PT00**
5. **Signal Strength Meter . mounted on P.W. Board PX00**

3. TEST EQUIPMENT REQUIRED FOR SERVICING

Item	Use
AM Signal Generator	Signal source for AM alignment
Test Loop	Use with AM signal generator
FM Signal Generator	Signal source for FM alignment
MPX Signal Generator	Stereo separation alignment and trouble shooting
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
AC VTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Frequency Counter	MPX oscillator adjustment (VCO)
Circuit Tester	Trouble shooting
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to tuner
Line Voltmeter	Monitors potential of primary power to tuner
Variable Autotransformer (0 ~ 140V AC, 10A)	Adjusts level of primary power to tuner

4. TUNER ALIGNMENT PROCEDURES

A dummy resistor of 47 kohms must be connected across the tuner output terminals before alignment.

4.1 FM Alignment Procedures (Function switch in the "FM" position, MODE switch in the MONO position.)

1. FM RF Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	FM signal generator to FM antenna terminal (300Ω) through matching network Set the SG RF output level so that some noise can be observed on the upper and lower side of the output waveform.	98.00 MHz	VTVM to L or R chnnel output (J104)	98.00 MHz	FRONT END IFT (L8) for maximum output and minimum distortion.
2	FM signal generator 1 mV output to FM antenna terminal (300Ω) through matching network Modulation Level DIN 40 kHz DEV. IHF 75 kHz DEV.	98.00 MHz	"O" center meter or DC current meter in 100 μA range between (J105, J108)	98.00 MHz	L201 (Primary) core so that the meter indicates its center or may read "O".
3	FM signal generator 1 mV output to FM antenna terminal (300Ω) through matching network.	98.00 MHz	Distortion meter to L or R channel output (J104)	98.00 MHz	L202 (Secondary) core for minimum distortion.

4.2 Muting Level Alignment (Function switch in the "FM" position, MODE switch in the "AUTO STEREO" position.)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	FM signal generator 12.5 μV output to FM antenna terminal through matching network (300 ohm, balanced)	98.00 MHz	VTVM to L or R channel output (J104)	98.00 MHz	Adjust R216 until output is developed.

4.3 Multiplex Alignment Procedures (Function switch in the "FM" position, MODE switch in the "AUTO STEREO" position.)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	FM signal generator 1 mV output modulated by MPX signal generator to FM antenna terminal (300Ω) through matching network Modulation Level DIN 40 kHz+8% Pilot DEV. IHF 67.5 kHz+9% Pilot DEV.	No modulation	Frequency counter to (J301)	98.00 MHz	R307 so that Frequency may precisely read 76,000 kHz.
2		Stereo left (1,000 Hz)	VTVM to right channel output (J104 Rch)		R334 for same separation in both channels.
3		Stereo right (1,000 Hz)	VTVM to left channel output (J104 Lch)		
4	Repeat steps 2 and 3.				
5	RF generator to Fm antenna terminals through matching network (300 ohms, balanced) with 1 mV FM stereo signal.	Pilot only	VTVM to right and left channel output (J104)		R302 so that minimum output should be the same in both channels.

4.4 AM Alignment Procedures (Function switch in the "AM" position.)

1. AM IF Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	Sweep generator to AM Antenna Terminal.	450 kHz marker	Oscilloscope to (JA01)	———	LA05 for maximum and symmetric response.

2. AM Local Oscillator Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	———	———	DC voltmeter in 3V range to (J106, J107)	522 kHz (520 kHz)	LA01 for 1.5 V

3. AM RF Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	Apply the signal to the AM loop antenna from the AM signal generator using the test loop.	603 kHz (600 kHz)	VTVM to L or R channel output (J104)	603 kHz (600 kHz)	LA03 for maximum output.
2		1,404 kHz (1,400 kHz)		1,404 kHz (1,400 kHz)	CA29-1 for maximum output.
3	Repeat steps 1 and 2.				

4. LW Local Oscillator Alignment (Function switch in the "LW" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1			DC voltmeter in 12V range to (J106, J107)	153 kHz	LA02 for 3.0V.

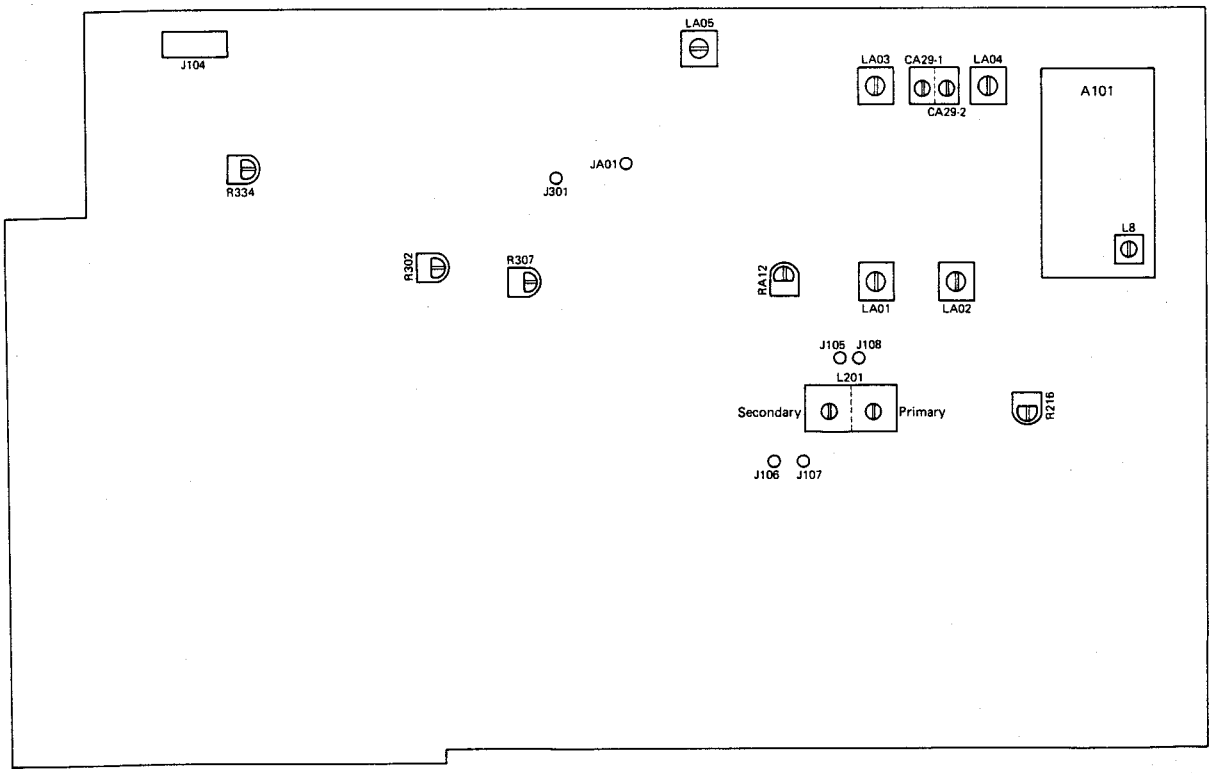
5. LW RF Alignment (Function switch in the "LW" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	Apply the signal to the AM loop antenna from the RF generator using the test loop.	344 kHz	VTVM to L or R channel output (J104)	344 kHz	CA29-2 for maximum output.
2		173 kHz		173 kHz	LA04 for maximum output.
3	Repeat steps 1 and 2 as necessary to obtain maximum sensitivity.				

6. AM Signal Alignment (Function switch in the "AM" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	Apply a signal to the AM loop antenna from the RF generator via the test test loop.	999 kHz	———	999 kHz	Adjust RA12 so that 5 signal LEDs light.

5. TEST POINTS AND ALIGNMENT POINTS



6. μPD1704C-544 (Q501)

1. SINGLE-CHIP MICROPROCESSOR CONTAINING PLL FREQUENCY SYNTHESIZER FOR μPD1704C-544 (Q501) AM/FM TUNER

- **Absolute Maximum Ratings**

Item	Symbol	Ratings	Unit
Supply voltage	V_{DD}	−0.3 ~ +6.0	V
Input voltage	V_I	−0.3 ~ +V_{DD}	V
Output voltage	V_O	−0.3 ~ +V_{DD}	V
Output absorption current	I_O	10	mA
Operating temperature	Topt	−35 ~ +75	°C
Storage temperature	Tstg	−55 ~ +125	°C
Output withstand voltage	V_{BDS}	Across Sa and Sg terminals (voltage across drain and source)	V

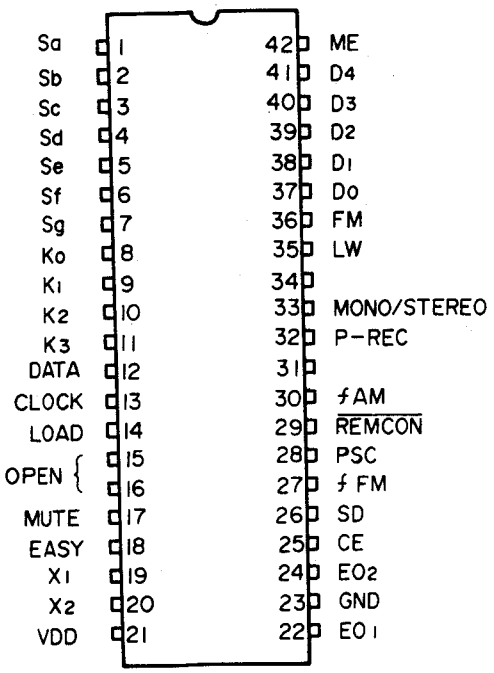
- **Recommended Operation Range**

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply voltage	V_{DD}		4.5	5.0	5.5	V
Data (RAM) holding voltage	V_{RAM}	CE=0, CLOCK STOP instruction execution	3.0		5.5	V
Oscillation stop supply voltage	V_{DDS}			3.2	3.8	V
Output withstand voltage	V_{BDS}	Across Sa and Sg terminals (voltage across drain and source) I_{OH}=−5 μA			−30	V
Rise time of supply voltage	Trise	V_{DD}=0 → 4.5V			500	ms

- **Electrical Charateristics** (V_{DD} = +4.5 ~ +5.5V, Ta = −35 ~ +75°C)

Item	Symbol	Condition		Min.	Typ.	Max.	Unit
High-level input voltage	V_{IH1}	SD, INT terminal		0.8V_{DD}		V_{DD}	V
High-level input voltage	V_{IH2}	I/O port, CE terminal		0.7V_{DD}		V_{DD}	V
High-level input voltage	V_{IH3}	K_0 ~ K_3 terminal		0.6V_{DD}		V_{DD}	V
Low-level input voltage	V_{IL1}	I/O port, CE terminal		0		0.3V_{DD}	V
Low-level input voltage	V_{IL2}	K_0 ~ K_3, SD, INT terminal		0		0.2V_{DD}	V
High-level output voltage	V_{OH1}	EO_1, EO_2 terminal	I_{OH}=−0.5mA	4.0			V
High-level output voltage	V_{OH2}	D_1 ~ D_6, MT/D_7, I/O port	I_{OH}=−0.2mA	4.0			V
High-level output voltage	V_{OH3}	PSC terminal	I_{OH}=−0.1mA	4.0			V
High-level output voltage	V_{OH4}	Sa ~ Sg terminal	I_{OH}=−0.5mA	3.0			V
Low-level output voltage	V_{OL1}	EO_1, ED_2 terminal, I/O port	I_{OL}=0.5mA			0.5	V
Low-level output voltage	V_{OL2}	D_1 ~ D_6, MT/D_7, PSC terminal	I_{OL}=0.2mA			0.5	V
High-level input current	$+I_{IH1}$	K_0 ~ K_3 terminal	V_{IN}=V_{DD}=5.0V	25	50	100	μA
High-level input current	$+I_{IH2}$	X_1 terminal (in pull down)	V_{IN}=V_{DD}=5.0V		300		μA
Low-level input current	$-I_{IL1}$	AM, FM terminal (in pull up)	V_{IN}=0, V_{DD}=5.0V		300		μA
Output leak current	I_L	EO_1, EO_2 terminal,	Ta=25°C		10^{-3}	1	μA
Response frequency	f_{AM}	AM terminal, Vin=1.0 Vp-p (MIN.), DC cut		0.5		2.5	MHz
Response frequency	f_{FM}	FM terminal, Vin=0.8 Vp-p (MIN.), DC cut		0.5		8.8	MHz
Operating current	I_{DD1}	Excluding I/O current from I/O terminals			3		mA
Data (RAM) holding current	I_{DD2}	CE=0, CKSTP instruction execution, Ta=25°C, V_{DD}=5.0V				10	μA

• Pin Connections



• Functions of Terminal

Pin No.	Symbol	Name	Function
1 ~ 7	Sa to Sg	Segment output	Key return signal source terminal, active at the high level.
8 ~ 11	$K_0 \sim K_3$	Key return signal input	Key return signal input terminal from the remote key matrix.
12 ~ 14	DATA CLOCK LOAD		Display data output terminals connected to static display driver QR01.
17	MUTE	Mute	Muting output terminal to kill shocks and noise that are caused when PLL is out of lock.
18	EASY		The high level is outputted for about 100 ms when the band, up/down and preset memory keys are depressed (output terminal for easy operation).
19, 20	X_1, X_2	X'tal	Quartz crystal oscillator connection terminal (4.5 MHz).
21	V_{DD}	V_{DD}	Device power terminal.
22	EO_1	Error output	Phase detector charge pump output.
23	GND	Ground	Connected to the system ground.
25	CE	Chip enable	Low level in back-up, high level with the device operated in standard form.
26	SD	Station detector	Inputs auto tuning stop signal.
27	f_{FM}	FM local oscillator signal inputs	Inputs output (1/16, 1/17) into which FM local oscillator output is divided by prescaler Q502.
28	PSC	Prescaler control	Outputs division ratio change-over signal to the prescaler when the pulse swarrow method is used for division.
29	$\overline{\text{REMCON}}$		Remote-control input terminal, active at the low level.
30	f_{AM}	AM local oscillator signal inputs	Inputs MW/LW local oscillator output.
32	P-REC		High level in preset record enable mode.
33	MONO/ STEREO		The FM band is in either MONO or STEREO mode. High level in STEREO mode.
35	LW		Outputs the high level when the LW band is currently received.
36	FM		Outputs the high level when the FM band is currently received.
37 ~ 41	$D_0 \sim D_4$		Display data output terminal to dot display driver UPD6322C.
42	ME		Outputs the high level in memory enable mode.

7. OUTLINE OF FUNCTIONS

• Receiving Band

Three bands of FM, MW and LW can be received in Europe, and two bands of FM and AM in Japan and the U.S.A.

Destination	Type of Band	Receiving Frequency Range	Channel Space	Reference Frequency	Intermediate Frequency
Europe	MW	522 ~ 1611 kHz	9 kHz	9 kHz	450 kHz
	LW	153 ~ 353 kHz	1 kHz	1 kHz	450 kHz
	FM	87.50 ~ 108.00 MHz	50 kHz	10 kHz	10.7 MHz
U.S.A.	AM	520 ~ 1610 kHz	10 kHz	10 kHz	450 kHz
	FM	87.5 ~ 108.0 MHz	100 kHz	10 kHz	10.7 MHz
Japan	AM	522 ~ 1611 kHz	9 kHz	9 kHz	450 kHz
	FM	76.0 ~ 90.0 MHz	100 kHz	10 kHz	10.7 MHz

- **Channel Selecting Function**

(1) Automatic Up/Down Tuning (sawtooth wave mode)
A channel is selected at a speed of approx. 60 ms/step until high-level input is developed at pin (26) of the SD terminal.

(2) Manual Up/Down Tuning (sawtooth wave mode)
Single-finger depression of the momentary switch allows stepwise forward, and continuous depression for 0.5 second or longer runs the tape fast forward at approx. 60 ms/step.

(3) Preset Memory Access
FM . . . . . 8 channels, M1 ~ M8
LW/MW . . . 8 channels, M1 ~ M8 in random access

- **Preset Memory Write**

A frequency being currently received is written by depressing the preset key while the ME lamp is lit.

- **Programmable Preset Recording Function**

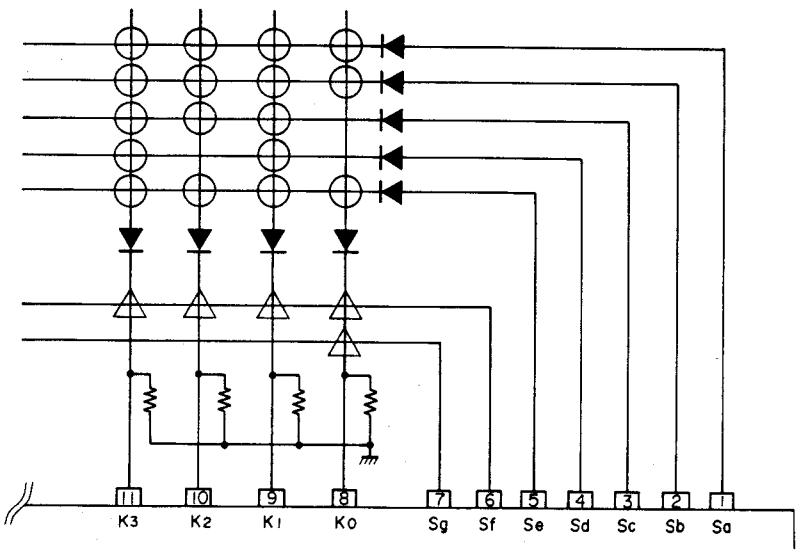
Programs can be reserved up to six channels in FM, MW and LW bands by the memory and preset keys while the PRG-REC lamp is lit.
Whenever the chip enable signal changes from high to low level during operation of the PRG-REC lamp, a channel is accessed in the order of reservation. Reserved channels are displayed every second when the MONITOR key is depressed in that state.

- **Remote Control Function**

The following actions are allowed by remote control.
(1) Preset memory access
(2) Band change-over
(3) Manual/automatic up/down channel selection

8. CONFIGURATION OF KEY MATRIX

	K_3	K_2	K_1	K_0	Type of Key
S_a	M1	M2	M3	M4	Momentary switch
S_b	M5	M6	M7	M8	
S_c	UP	DOWN	MEMO	P-SCAN	
S_d	P-REC		MONI		
S_e	MW (AM)	FM	LW	MONO/ST	
S_f	BAND 2	BAND 1		N/N+2	Initialize diode matrix
S_g				LW	



9. DESCRIPTION OF KEY MATRIX

- **Momentary Key**

(1) M1 ~ M8
Preset, memory write, access and preset recording program reservation keys.

(a) Write (in any mode other than P-REC)
When any one of the M1 ~ M8 keys is depressed within about 5 seconds after depression of the MEMO key (while the ME lamp is lit), a frequency currently received and MONO/STEREO (only in FM) are stored in a location of the memory corresponding to the depressed key.

(b) Access
When any one of the M1 ~ M8 keys is depressed, contents (frequency, MONO/STEREO) in a location

of the memory corresponding to the depressed key are accessed. Eight FM channels can be accessed while 8 MW/LW channels can be accessed at random.

(c) Preset recording program reservation
A program can be reserved by depressing any one of the M1 ~ M8 keys within about 5 seconds after depression of the MEMO key in P-REC mode.
Programs can be reserved up to six channels in FM, MW and LW bands at random. An ordinary access to the memory is taken unless the ME lamp is lit even in P-REC mode.

(2) MEMO
The key shows preset memory write mode or preset recording program reservation enable mode. When the key is depressed, the ME lamp is lit for about 5 seconds and enable mode is set.

(3) UP/DOWN
Automatic/manual channel selection key (sawtooth wave mode).

(a) Manual
Frequency is stepped up or down (channel step) whenever the key is depressed. Continuous depression of these keys for about 0.5 second or longer allows continuous forward of the tape at about 60 ms/step.

(b) Automatic
When the key is released with continuous forward run in manual mode, frequency is automatically stepped up or down. Scanning is stopped when the high level is inputted to the SD (station detector) terminal or when these keys are redepressed.

(4) P-SCAN
Pressing this key starts scanning for memory channels from M1 on (for 5 seconds per channel) on the currently selected band.

(5) P-REC
The P-REC lamp comes on with the key depressed to display preset record enable mode. Redepression of the key clears the same mode. The UP/DOWN key does not function in P-REC mode.

(6) MONITOR
The key operates only in P-REC mode. When the key is depressed, the contents of reserved programs are displayed every second and the tape stops in the last.

(7) FM, MW (AM) and LW
When any one of these keys is depressed, a last channel of a band corresponding to the depressed key is accessed. However, the LW key is ignored if LW null is selected on the diode matrix.

(8) MONO/STEREO
Either MONO or STEREO mode is cyclically set with the key depressed. MONO/STEREO can be preset to the memory.

10. DIODE MATRIX INITIAL SETTINGS

(1) BAND 1, BAND 2
Determine the region of use.

	U.S.A.	Europe	Japan
BAND 1	0	0	1
BAND 2	0	1	1

1: Diode installed
0: Open

(2) LW
Lnstall a diode when the LW band is received.

(3) N/N+2
Determines the frequencies which can be received when SD checks are performed at 9 kHz intervals.
1: (9 x N) 153, 162, 171, ... , 342, 351 (kHz)
0: (9 x N+2) 155, 164, 171, ... , 344, 353 (kHz)

11. INDICATORS

(1) Indicators are static displays using the μPD6320G.

Output order	1	2 ~ 12	13 ~ 16	17 ~ 20	21 ~ 24	25 ~ 28	29 ~ 32
Display contents	Internal flag	Flags D11 to D1	BCD 10 MHz or 100 kHz	BCD 1 MHz or 10 kHz	BCD 100 kHz or 1 kHz	BCD Preset station	BCD Preset station

The internal flag is always "1" (High).

D11 1 0
D10 5 . . . . . Common to 5 and 0. ⟩ FM station interval in Europe: 50 kHz
D9 – 5
D8 D.P.
D7 kHz
D6 MHz
D5 ME
D4 MW
D3 FM
D2 LW
D1 1 . . . . . Most significant digit displayed

The data, clock, load signals are output from pins 12, 13, and 14, respectively.

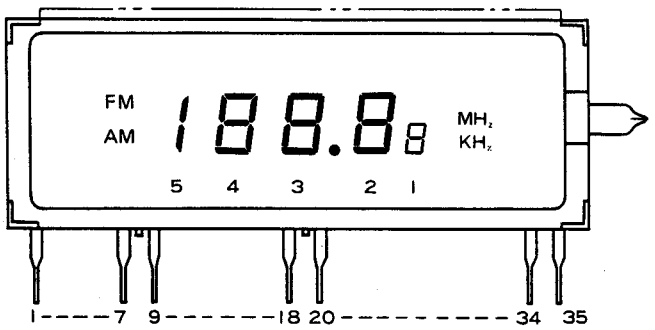
VR01 (Fluorescent display tube)

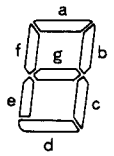
Pin assignments

Pin number		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Electrode connected	HQ30902060	F	b_5 c_5	a_4	f_4	e_4	d_4	c_4		g_4	b_4	a_3	f_3	e_3	d_3	c_3	g_3	b_3	a_2
	HQ31001060	F	b_5 c_5	a_4	f_4	e_4	d_4	c_4		g_4	b_4	a_3	f_3	e_3	d_3	c_3	g_3	b_3	a_2

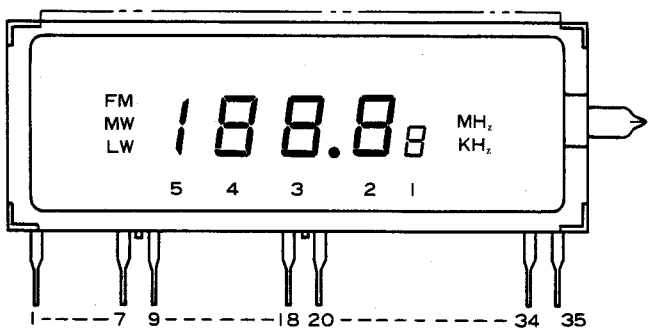
Pin number		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Electrode connected	HQ30902060		f_2	e_2	d_2	c_2	g_2	b_2	b_1 e_1	g_1	kHz	MHz	FM Dp	AM	a_1 d_1 c_1 f_1	G	G	F
	HQ31001060		f_2	e_2	d_2	c_2	g_2	b_2	b_1 e_1	g_1	kHz	MHz	FM Dp a_1 c_1 d_1 f_1	MW	LW	G	G	F

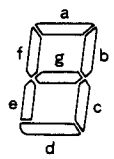
VR01
HQ30902060
(ST530)





VR01
HQ31001060
(ST530L)





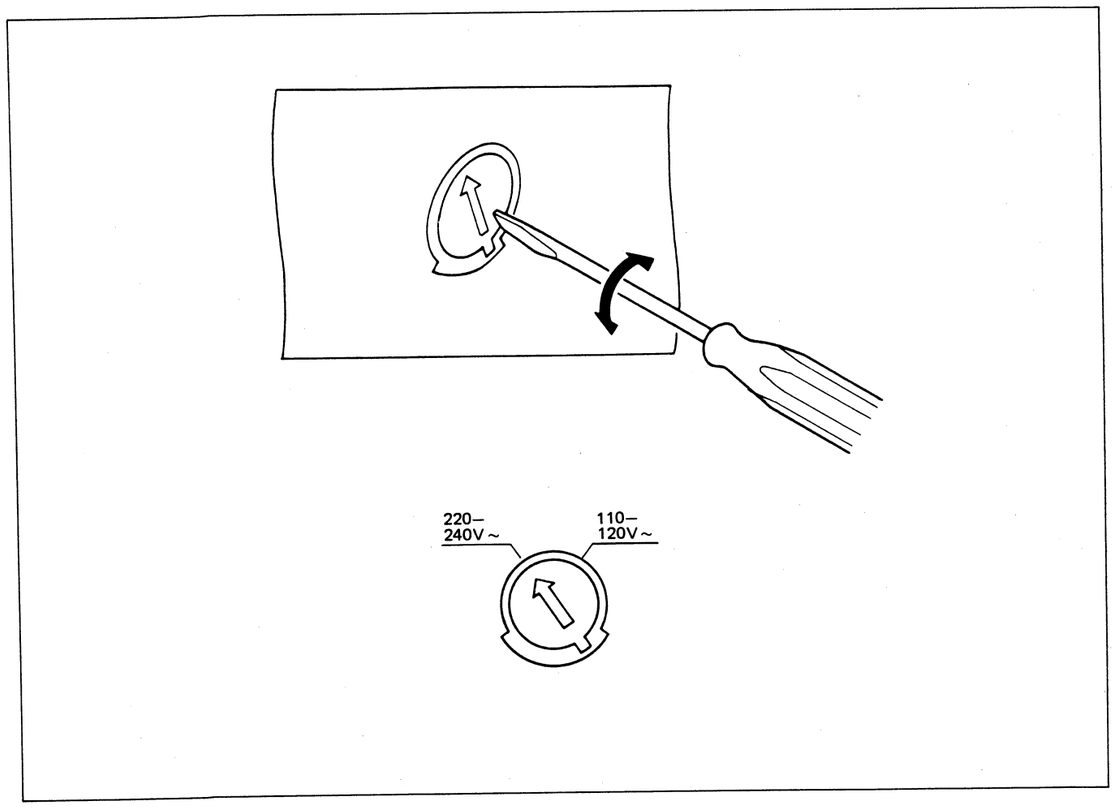
12. VOLTAGE CONVERSION

- **EUROPEAN MODEL ONLY**

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

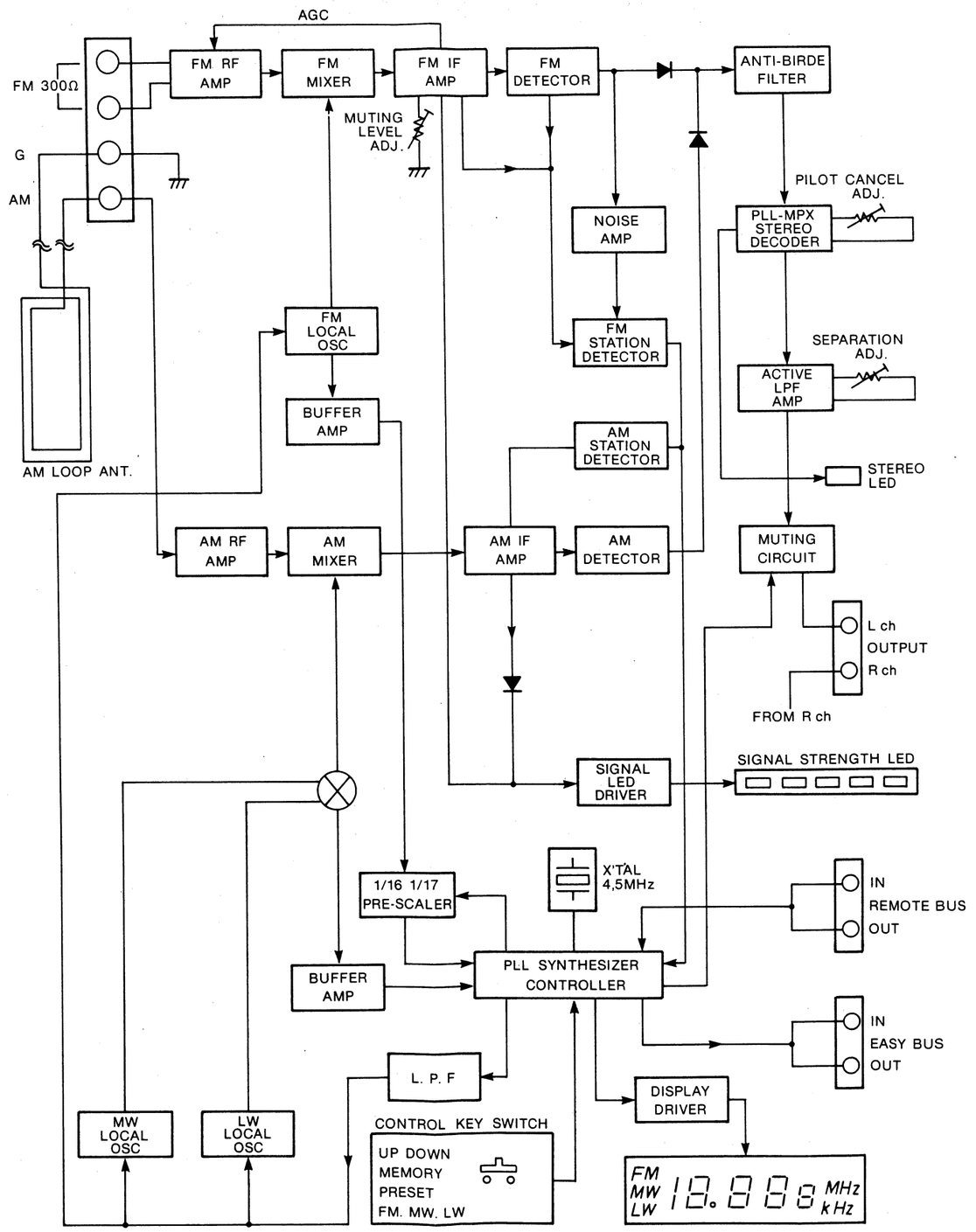
CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart



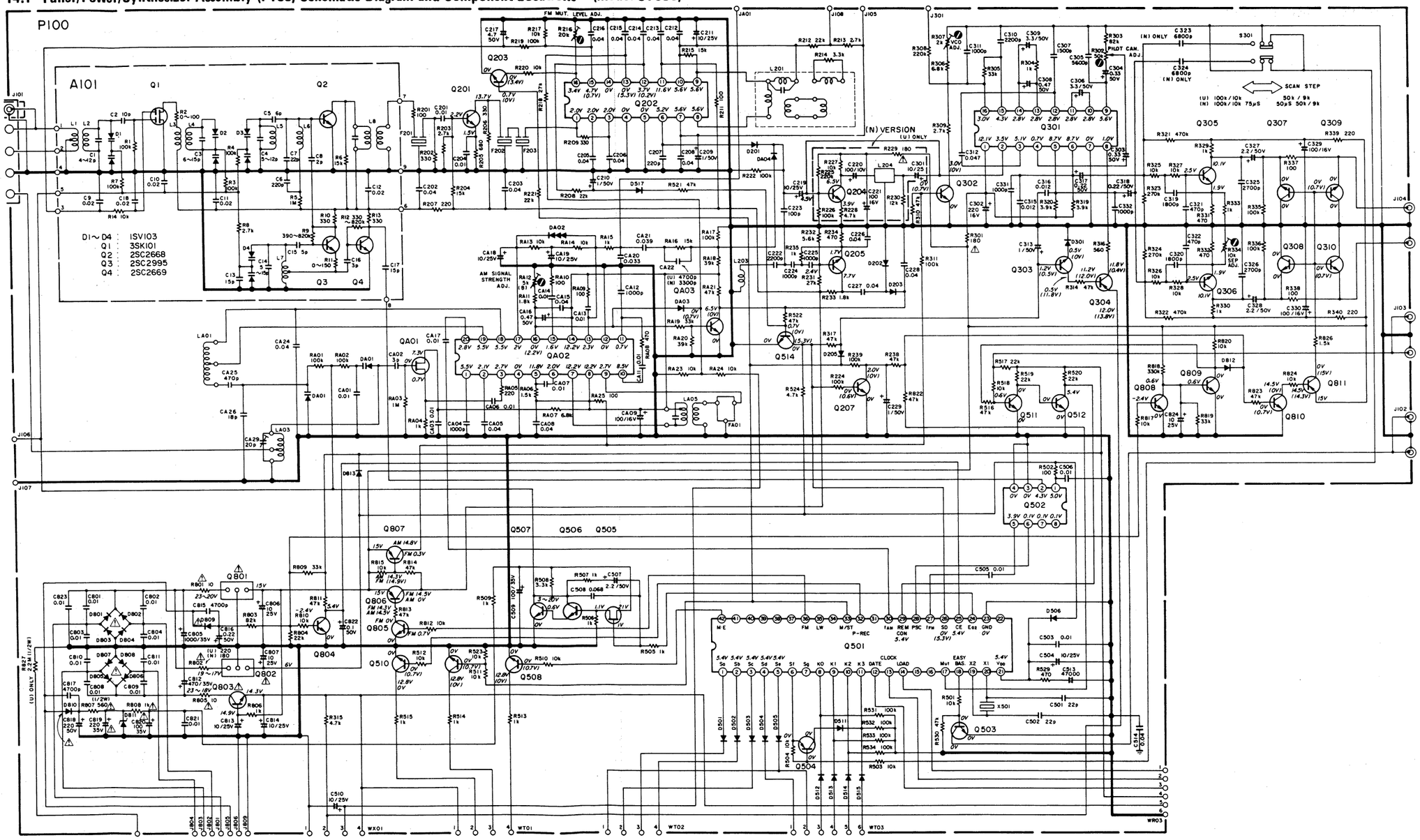
Note on safety: Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

13. BLOCK DIAGRAM

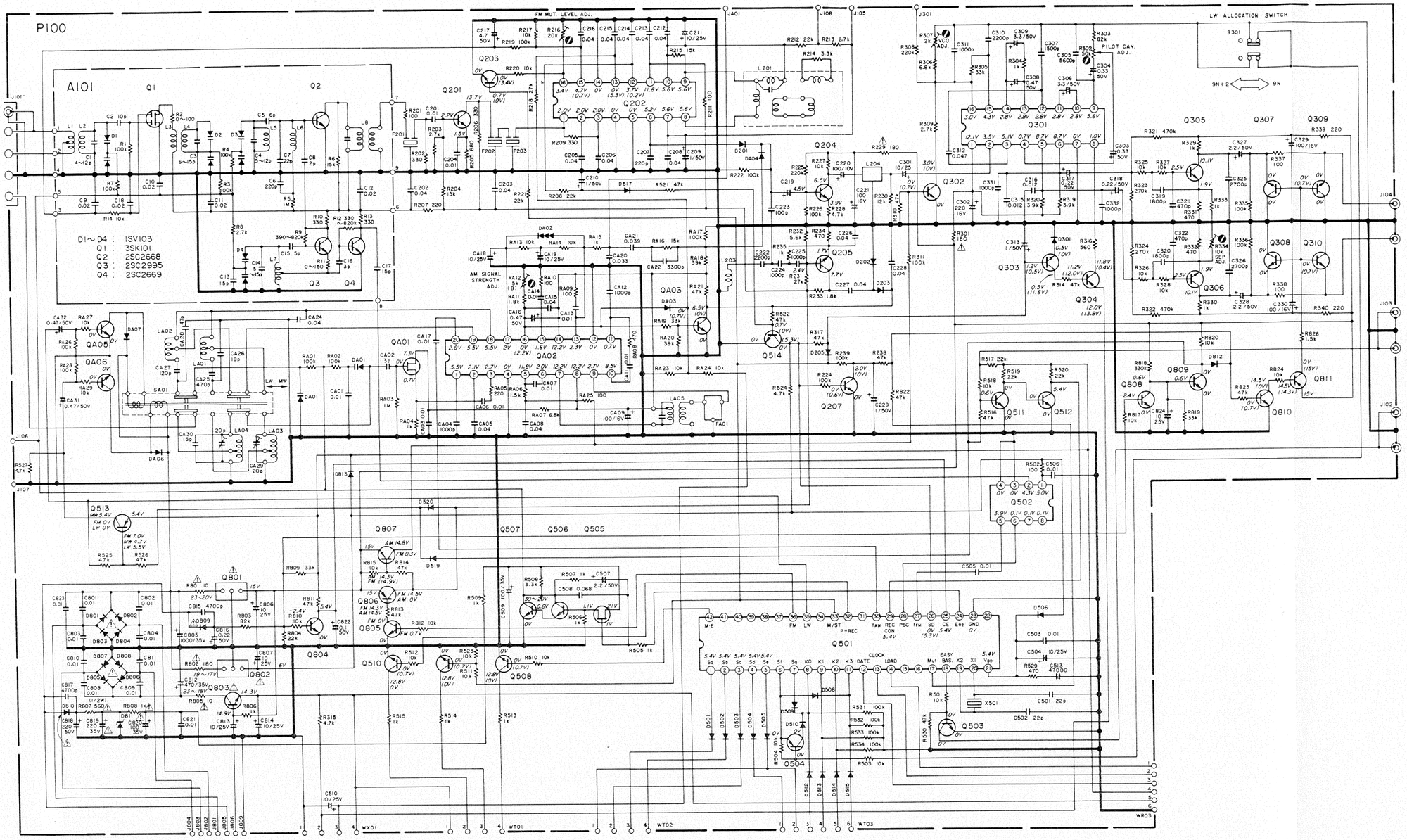


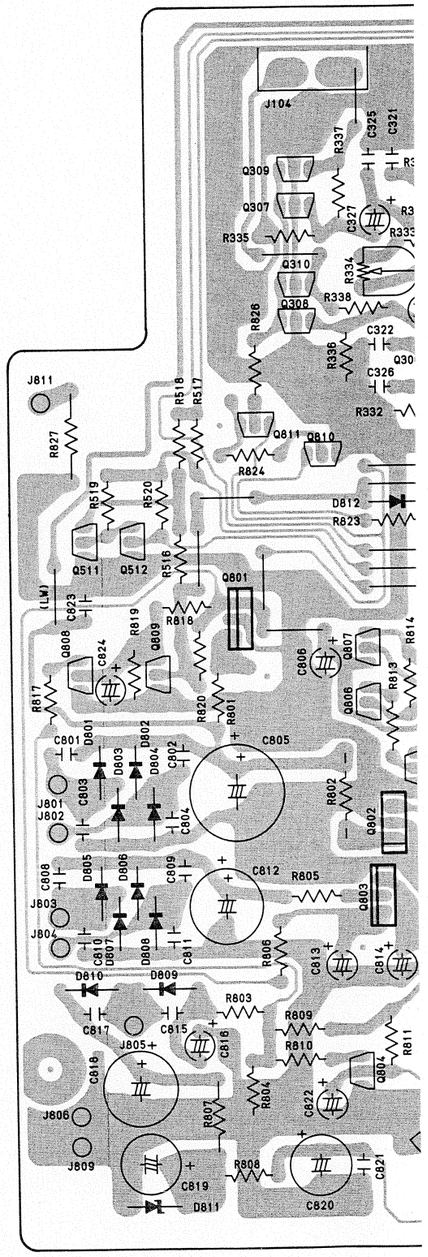
14. DIAGRAM AND COMPONENT LOCATIONS

14.1 Tuner/Power/Synthesizer Assembly (P100) Schematic Diagram and Component Locations (Model ST530)

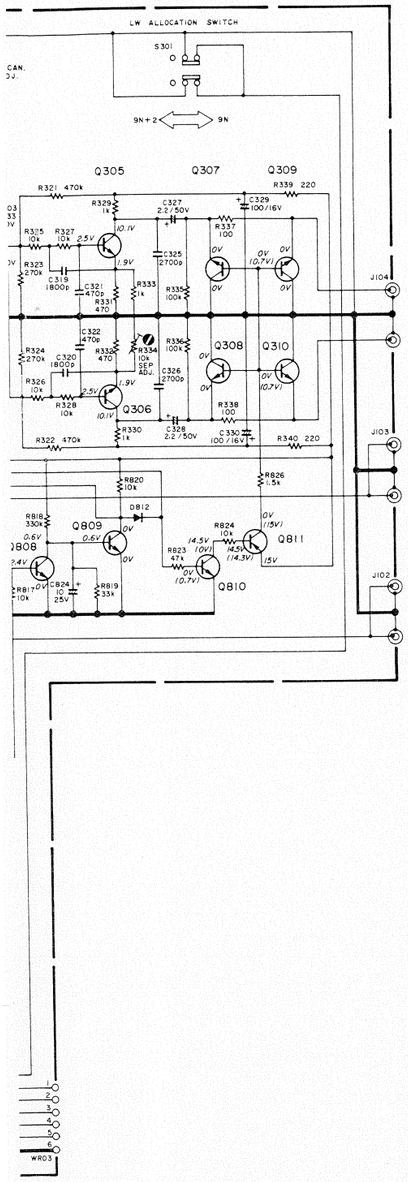


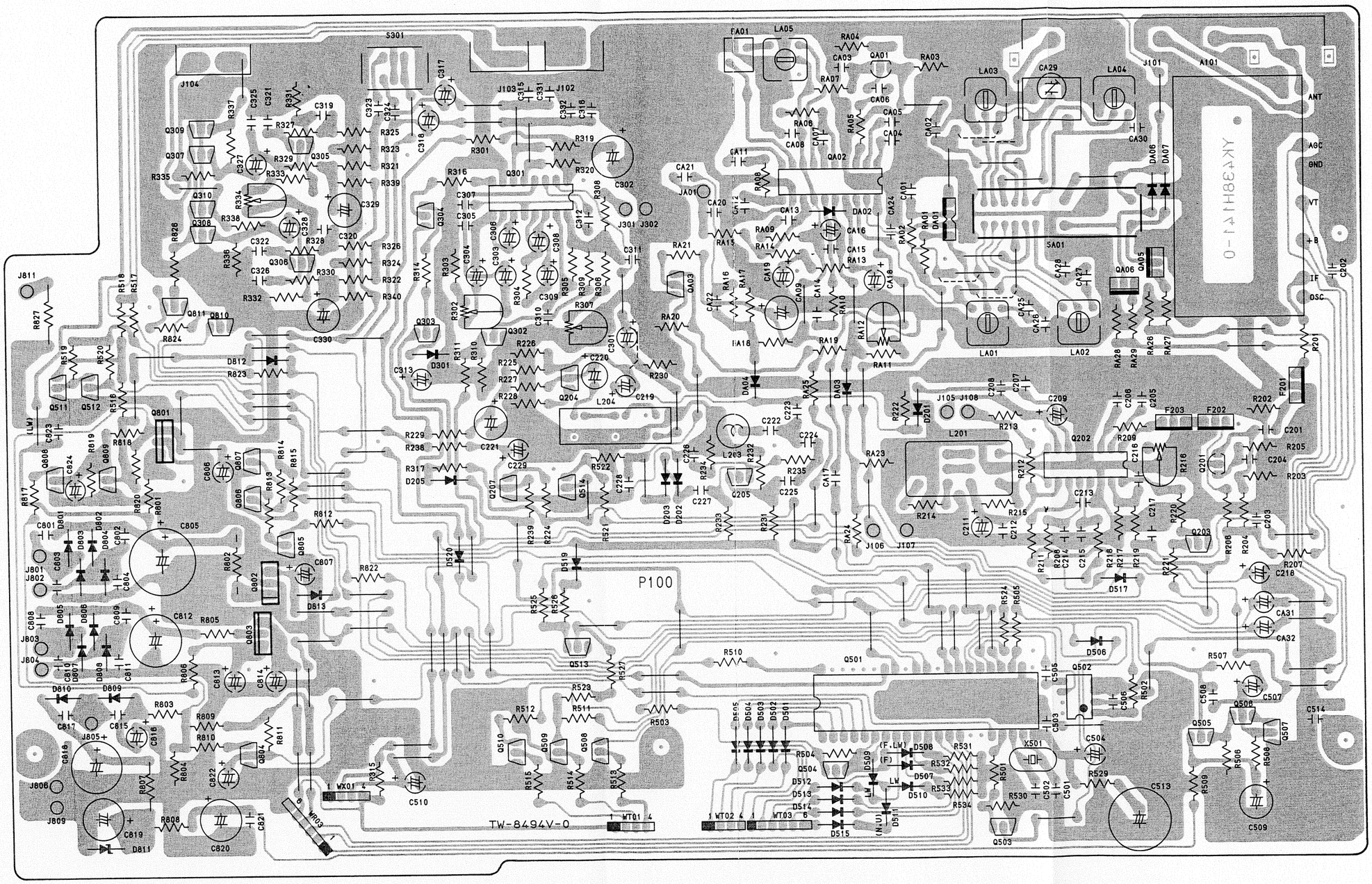
(Model ST530L)





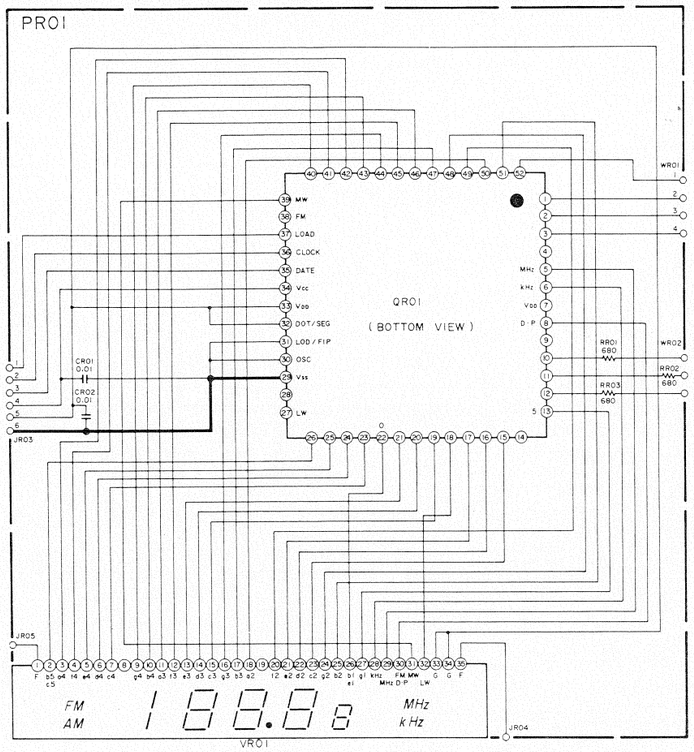
(Model ST530L)

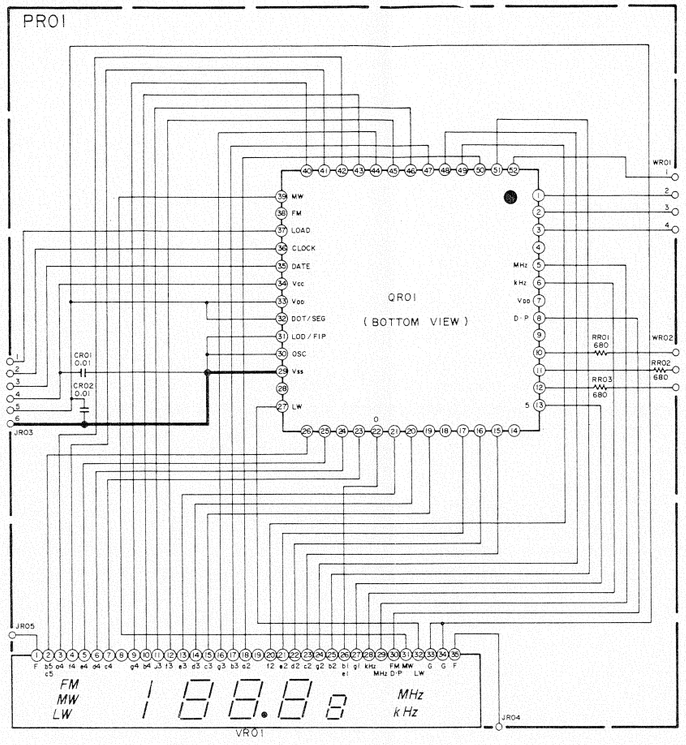


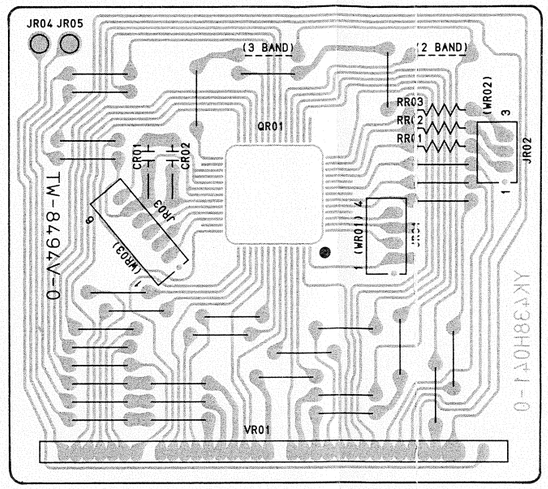


14.2 Disply Assembly (PR00) Schematic Diagram and Component Locations (Model ST530)

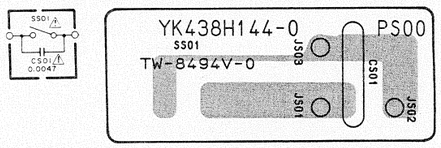
(Model ST530L)



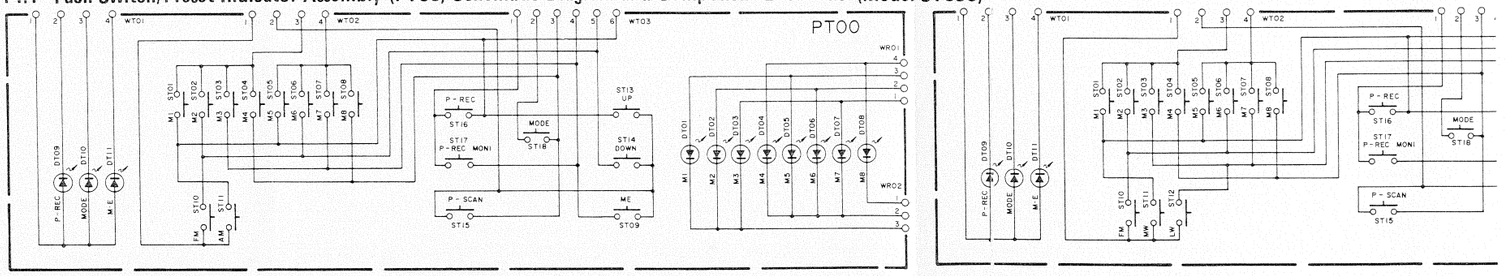


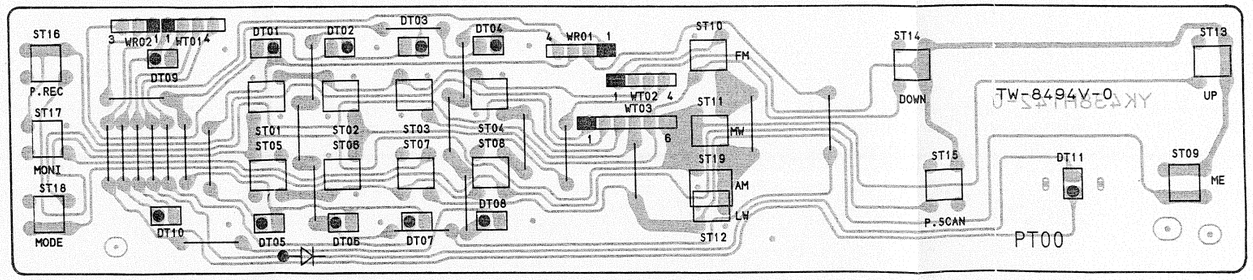


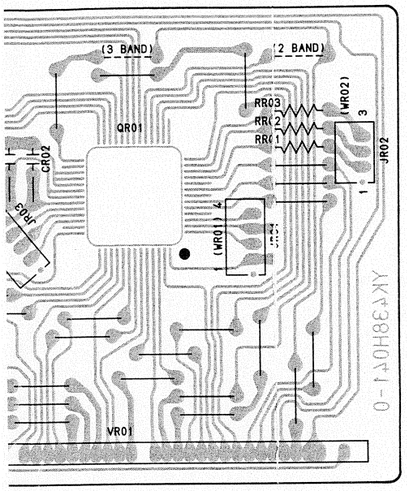
14.3 Power Switch Assembly (PS00) Schematic Diagram and Component Locations



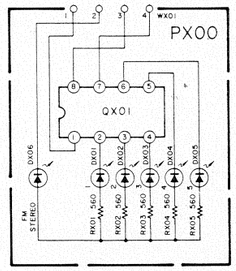
14.4 Tach Switch/Preset Indicator Assembly (PT00) Schematic Diagram and Component Locations (Model ST530)

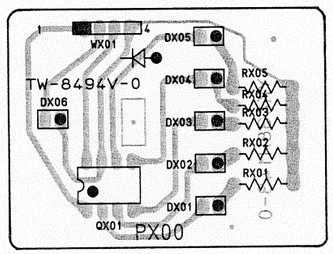




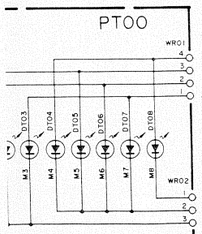


14.5 Signal Strength Meter Assembly (PX00) Schemtic Diagram and Component Locations

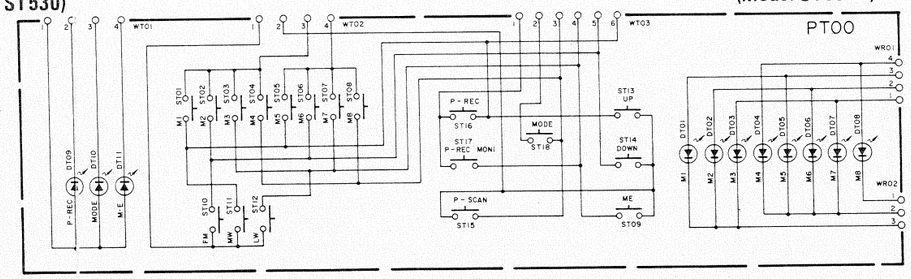


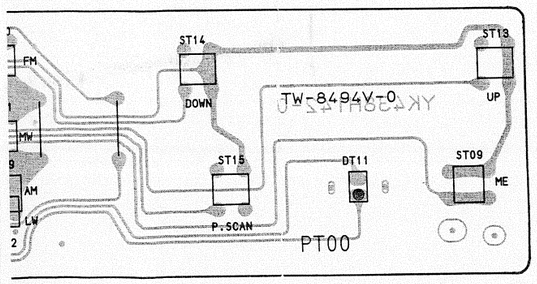


nent Locations (Model ST530)



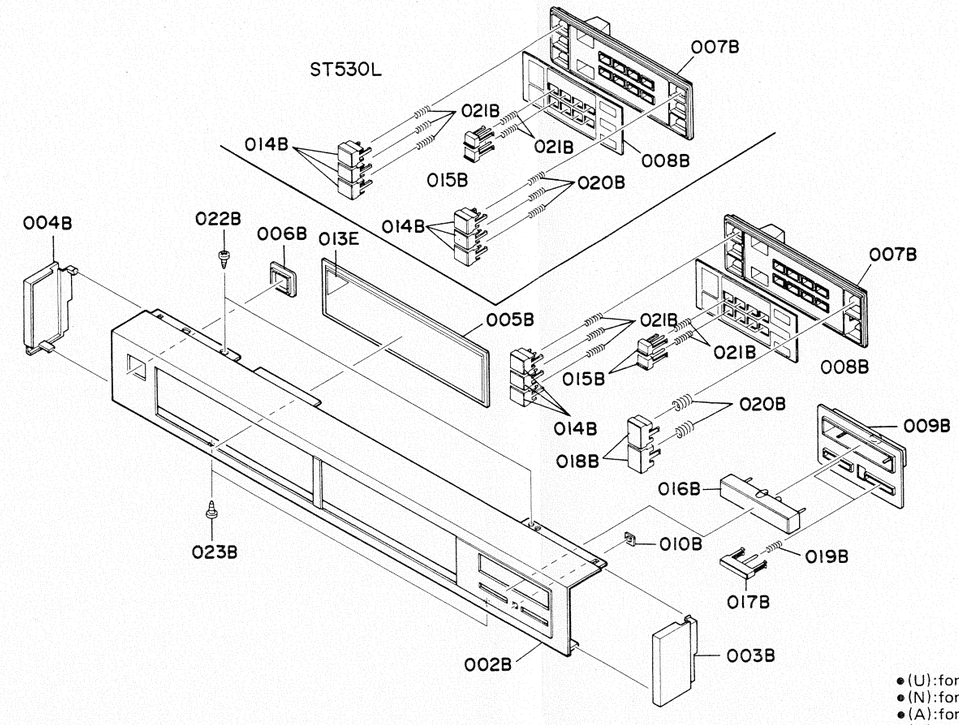
(Model ST530L)





15. EXPLODED VIEW AND PARTS LIST

- [C01-99] Front Panel

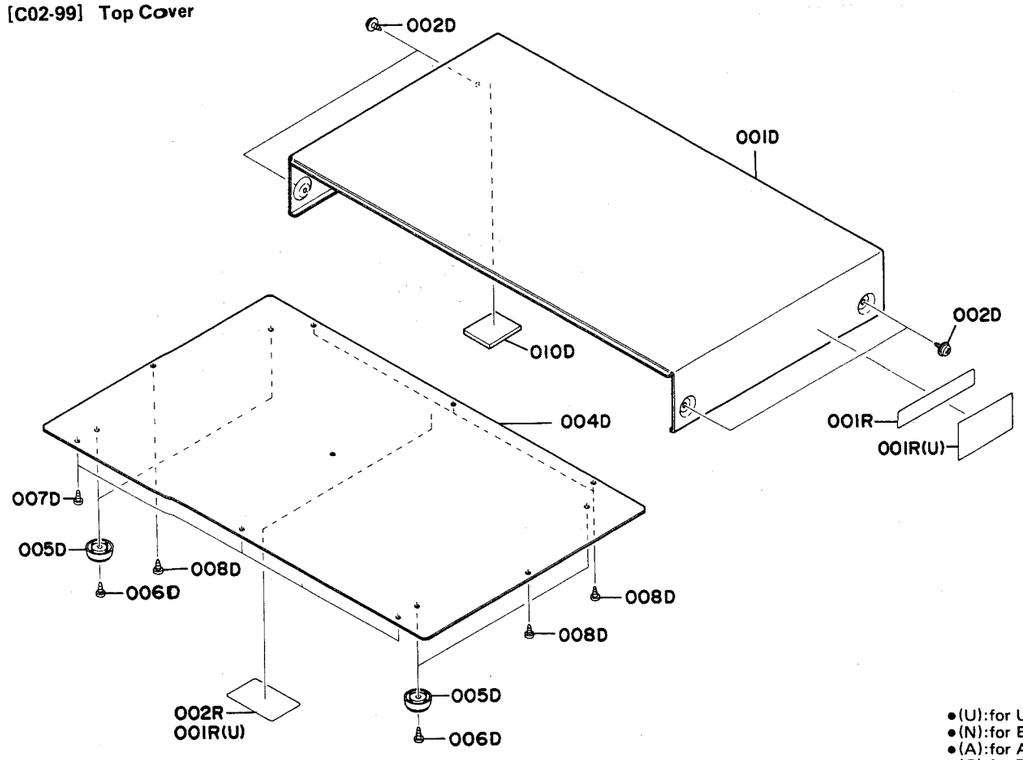


- (U):for U.S.A.
- (N):for Europe
- (A):for Australia
- (P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
						(ST530, ONLY)
A	1	1	1	1	438H063400	Front Panel Assembly
002B	1	1	1	1	438H063010	Escutcheon, Front Panel
003B	1	1	1	1	415H067210	Cap, Right
004B	1	1	1	1	415H067220	Cap, Left
005B	1	1	1	1	438H158010	Window, Front Panel
006B	1	1	1	1	415H259210	Bushing, Power Switch
007B	1	1	1	1	438H259010	Bushing, Mode/Preset
008B	1	1	1	1	438H158020	Window, Mode/Preset
009B	1	1	1	1	438H259020	Bushing, Tuning
010B	1	1	1	1	125H158010	Window, Memory
014B	3	3	3	3	420H154210	Knob, Memory/Rec/Mode
015B	8	8	8	8	141T154010	Knob, Preset
016B	1	1	1	1	431H154030	Knob, Tuning
017B	2	2	2	2	431H154010	Knob, Scan/Memory
018B	2	2	2	2	416H154220	Knob, AM/FM
019B	2	2	2	2	132T115010	Spring, Memo Scan
020B	2	2	2	2	249H115010	Spring, AM/FM Knob
021B	11	11	11	11	249H115010	Spring,Preset/Rec/Moni/Mode
022B	2	2	2	2	51280306B0	B.H. Tapped Screw B3 x 6
023B	2	2	2	2	51280306B0	B.H. Tapped Screw B3 x 6
013E	1				105H861010	Label

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
						(ST530L, ONLY)
A		1			439H063400	Front Panel Assembly
002B		1			439H063010	Escutcheon, Front Panel
003B		1			439H067210	Cap, Right
004B		1			415H067220	Cap, Left
005B		1			438H158010	Window, Front Panel
006B		1			415H259210	Bushing, Power Switch
007B		1			439H259010	Bushing, Mode/Preset
008B		1			439H158010	Window, Mode/Preset
009B		1			438H259020	Bushing, Tuning
010B		1			125H158010	Window, Memory
014B		6			420H154210	Knob
015B		8			141H154010	Knob, Preset
016B		1			431H154030	Knob, Tuning
017B		2			431H154010	Knob, Scan/Memory
019B		2			132T115010	Spring
020B		3			249H115010	Spring, FM/LW/MW
021B		11			249H115010	Spring,Preset/Rec/Moni/Mode
022B		2			51280306B0	B.H. Tapped Screw B3 x 6
023B		11			51280306B0	B.H. Tapped Screw B3 x 6

• [C02-99] Top Cover

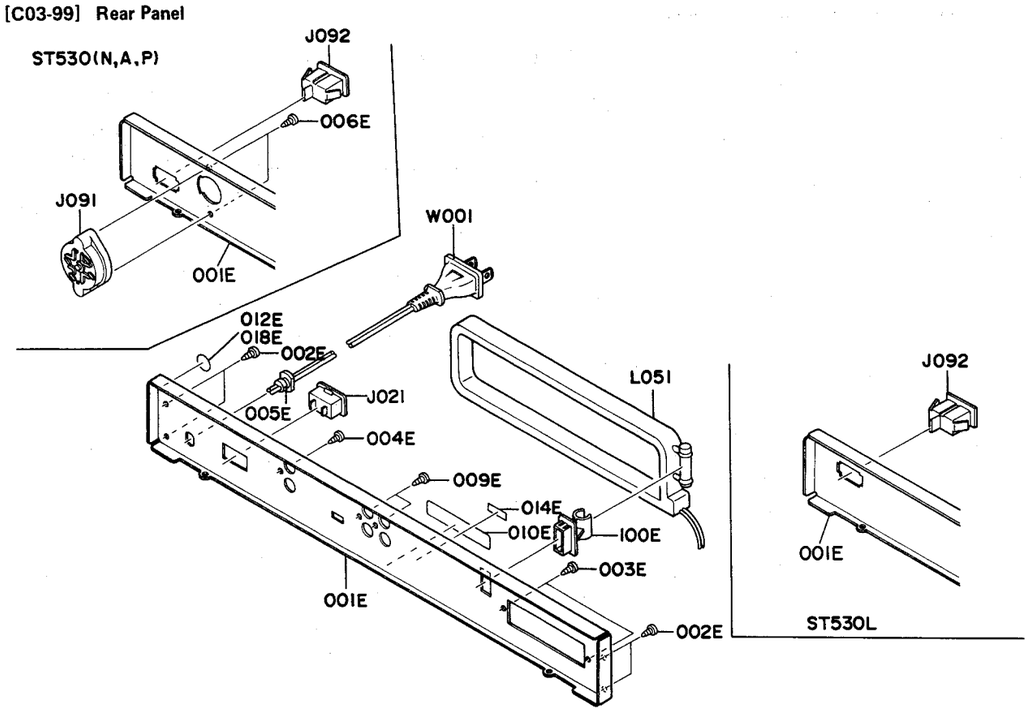


●(U):for U.S.A.
●(N):for Europe
●(A):for Australia
●(P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
001D	1	1	1	1	416H257210	Lid, Top Cover
002D	4				51260408Z0	B.T. Screw B4 x 8
002D		4	4	4	51260408U0	B.T. Screw B4 x 8
004D	1	1	1	1	416H257020	Lid, Bottom Cover
005D	4	4	4	4	415H057010	Leg
006D	4	4	4	4	51300408B0	P.H. Tapped Screw P4 x 8
007D	3	3	3	3	51280308B0	B.H. Tapped Screw B3 x 8
008D	5	5	5	5	51280308B0	B.H. Tapped Screw B3 x 8
010D	1	1	1	1	2979056020	Buffer

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
001R	2				117H861010	Label
001R		1	1	1	2911861140	Label
002R		1	1	1	2911861110	Label

• [C03-99] Rear Panel

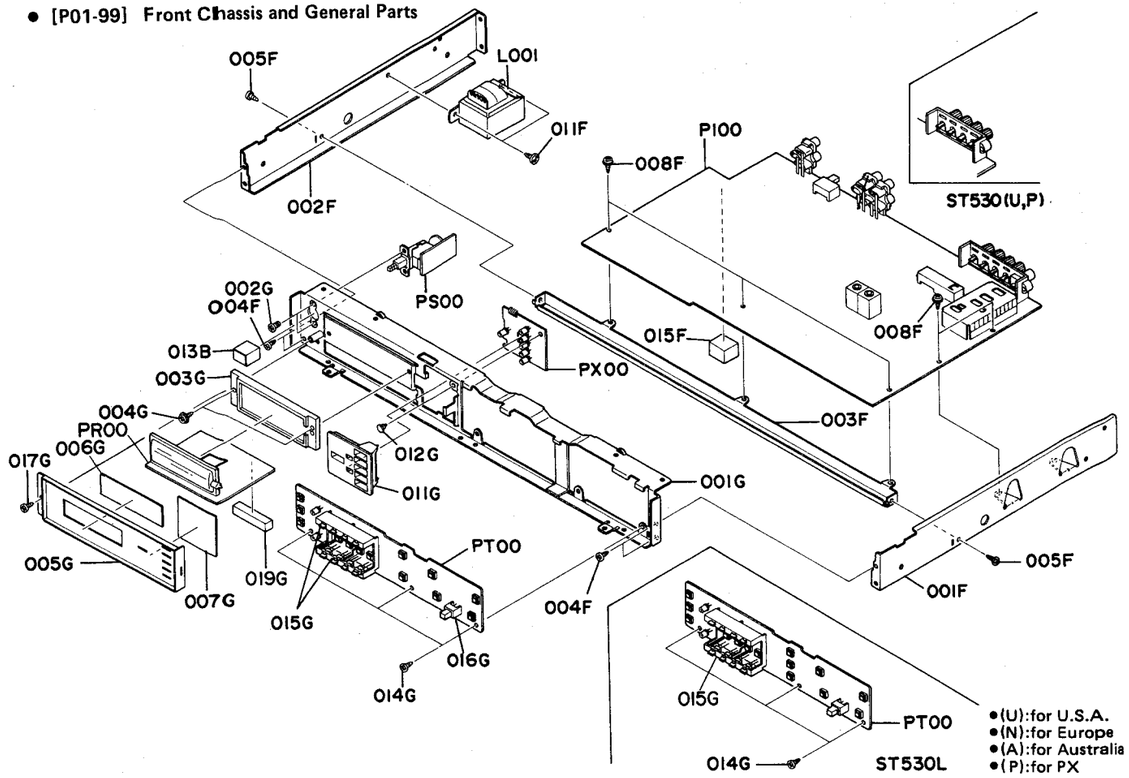


●(U):for U.S.A.
●(N):for Europe
●(A):for Australia
●(P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
001E	1				438H160230	Bracket, Rear Panel
001E		1	1		438H160220	Bracket, Rear Panel
001E				1	438H160240	Bracket, Rear Panel
001E		1			439H160220	Bracket, Rear Panel (ST530L)
002E	4	4	4	4	51280308B0	B.H. Tapped Screw B3 x 8
003E	2	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
004E	1	1	1	1	51280308B0	B.H. Tapped Screw B3 x 8
005E	1				1455259030	Bushing, AC Cord
006E		2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
009E	2	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
010E	1	1	1	1	2112265010	Indicator
012E	1				2457861040	Label, CSA
014E		1	1	1	4581861010	Label, Made in Japan
018E	1				9511101070	Label, UL
100E	1	1	1	1	417H271020	Holder Loop Ant.

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
⚠J021	1				YJ04000990	Jack, AC Outlet
⚠J091		1	1	1	BY05060060	Voltage Selector, (ST530)
⚠J092		1	1	1	YP04000580	Plug, AC Inlet
L051	1	1	1	1	LA00035010	Antenna Coil, Loop
⚠W001	1				YC01900070	A.C. Power Cord

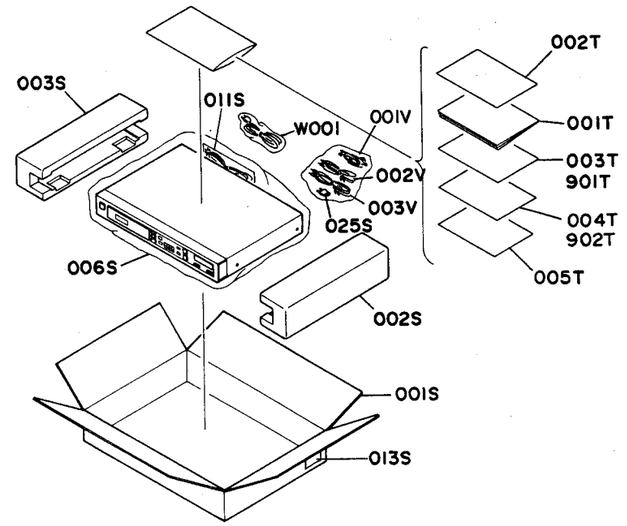
● [P01-99] Front Chassis and General Parts



REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
013B	1	1	1	1	415H154210	Knob, Power
001F	1	1	1	1	416H126010	Stay, Right
002F	1	1	1	1	416H126020	Stay, Left
003F	1	1	1	1	416H126030	Stay, Center
004F	4	4	4	4	51280308B0	B.H. Tapped Screw B3 x 8
005F	2	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
008F	5	5	5	5	51260308B0	B.T. Screw B3 x 8
011F	2	2	2	2	51280406B0	B.H. Tapped Screw B4 x 6
015F	1	1	1	1	416H056010	Buffer
001G	1	1	1	1	438H160010	Bracket, Front Chassis
002G	2	2	2	2	51100306A9	B.H.M. Screw B3 x 6
003G	1	1	1	1	416H259040	Bushing
004G	2	2	2	2	51260308B0	B.T. Screw B3 x 8
005G	1	1	1	1	438H302010	Dial
006G	1	1	1	1	127H158020	Window
007G	1	1	1	1	438H158030	Window
011G	1	1	1	1	438H274010	Reflector

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
012G	1	1	1	1	2276005050	Clamper
014G	3	3	3	3	51280308B0	B.H. Tapped Screw B3 x 8
015G	1	1	1	1	438H051010	Guide, Preset
016G	1	1	1	1	431H051020	Guide, Memory
017G	1	1	1	1	51100306A9	B.H.M. Screw B3 x 6
019G	1	1	1	1	208H056010	Buffer
⚠L001	1				TS14808430	Power Transformer
⚠L001		1	1	1	TS14808420	Power Transformer, (ST530)
⚠L001		1			TS14808450	Power Transformer, (ST530L)

● [H01-99] Packing Materials



●(U):for U.S.A.
●(N):for Europe
●(A):for Australia
●(P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
						PACKING
001S	1				438H801020	Packing Case
001S		1	1		438H801010	Packing Case
001S				1	438H801030	Packing Case, Out
001S		1			439H801010	Packing Case, (ST530L)
002S	1	1	1	1	416H809010	Cushion, (R)
003S	1	1	1	1	416H809020	Cushion, (L)
006S	1	1	1	1	9090808030	Polyethylene Sheet
011S	1				2918107390	Sheet
013S	2				9526019010	Serial No. Cord
013S		4			9526019060	Serial No. Cord
013S			4		9526019030	Serial No. Cord
013S				3	9526019050	Serial No. Cord
025S				1	YJ04000240	Jack, AC Adaptor
001T	1				438H851210	Instructions
001T		1	1	1	438H851310	Instructions
002T	1				438H851220	Instructions, Spec
002T		1	1	1	438H851320	Instructions, Spec

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
003T	1				103H854010	Guarantee Card
003T		1			438H856010	Circuit Diagram, (ST530)
003T			1		9631000090	Guarantee Card
003T				1	416H854010	Guarantee Card
003T		1			439H856010	Circuit Diagram, (ST530L)
004T	1				2225813010	Envelope
004T				1	9650000010	S. Station Card
005T	1				9560000100	Hang Tag
005T				1	3435851210	Instructions
901T	1				2818854040	Guarantee Card Canada
902T	1				9650000050	S. Station Card Canada
⚠W001		1			ZC01805010	A.C. Power Cord
⚠W001			1		ZC02006020	A.C. Power Crod
⚠W001				1	ZC01807010	A.C. Power Cord
001V	1	1	1	1	ZA02000070	EXT. Antenna
002V	1	1	1	1	ZD01000170	Connective Cord
003V	1	1	1	1	ZD00400090	Connective Cord

16. ELECTRICAL PARTS LIST

- (U):for U.S.A.
- (N):for Europe
- (A):for Australia
- (P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
						P100-MAIN CIRCUIT BOARD (ST530, ONLY)
P100	1	1	1	1	YK438H1410	P.W. Board, Main
	1				ZZ438H1410	P.W. Board Assembly
		1	1		ZZ438H8410	P.W. Board Assembly
				1	ZZ438H7410	P.W. Board Assembly
						(ST530L, ONLY)
P100		1			YK438H1410	P.W. Board, Main
		1			ZZ439H8410	P.W. Board Assembly
						P100-CAPACITORS
CA01	1	1	1	1	DK18103310	Ceramic 0.01μF
CA02	1	1	1	1	DD10030370	Ceramic 3pF ±0.25V
CA03	1	1	1	1	DK18103310	Ceramic 0.01μF
CA04	1	1	1	1	DK18102300	Ceramic 1000pF
CA05	1	1	1	1	DK18403320	Ceramic 0.04μF
CA06	1	1	1	1	DK18103310	Ceramic 0.01μF
CA07	1	1	1	1	DK18103310	Ceramic 0.01μF
CA08	1	1	1	1	DK18403320	Ceramic 0.04μF
CA09	1	1	1	1	EA10701630	Elect 100μF 16V
CA11	1	1	1	1	DK18103310	Ceramic 0.01μF
CA12	1	1	1	1	DK18102300	Ceramic 1000pF
CA13	1	1	1	1	DK18103310	Ceramic 0.01μF
CA14	1	1	1	1	DK18103310	Ceramic 0.01μF
CA15	1	1	1	1	DK18403320	Ceramic 0.04μF
CA16	1	1	1	1	EA47405030	Elect 0.47μF 50V
CA17	1	1	1	1	DK18103310	Ceramic 0.01μF
CA18	1	1	1	1	EA10602530	Elect 10μF 25V
CA19	1	1	1	1	EA10602530	Elect 10μF 25V
CA20	1	1	1	1	DF15223310	Film 0.022μF ±5%
CA21	1	1	1	1	DF15393310	Film 0.039μF ±5%
CA22	1			1	DF15472310	Film 4700pF ±5%
CA22		1	1		DF15332310	Film 3300pF ±5%
CA24	1	1	1	1	DK18403320	Ceramic 0.04μF
CA25	1	1	1	1	DF15471550	Film 470pF ±5%
CA26	1	1	1	1	DD15180370	Ceramic 18pF ±5%
CA27		1			DF15121550	Film 120pF ±5%,(ST530L)
CA28		1			DD15470370	Film 47pF ±5%,(ST530L)
CA29	1	1	1	1	CT12000090	Trimming 20pF, (ST530)
CA29		1			CT21600020	Trimming 16pF, (ST530L)
CA30		1			DD15150370	Ceramic 15pF ±5%,(ST530L)
CA31		1			EA47405030	Elect 0.47μF 50V,(ST530L)
CA32		1			EA47405030	Elect 0.47μF 50V,(ST530L)
C201	1	1	1	1	DK18103310	Ceramic 0.01μF
C202	1	1	1	1	DK18403320	Ceramic 0.04μF
C203	1	1	1	1	DK18403320	Ceramic 0.04μF
C204	1	1	1	1	DK18103310	Ceramic 0.01μF
C205	1	1	1	1	DK18403320	Ceramic 0.04μF
C206	1	1	1	1	DK18403320	Ceramic 0.04μF
C207	1	1	1	1	DK16221300	Ceramic 220pF ±10%
C208	1	1	1	1	DK18403320	Ceramic 0.04μF
C209	1	1	1	1	EA10505030	Elect 1μF 50V
C211	1	1	1	1	EA10602530	Elect 10μF 25V
C212	1	1	1	1	DK18403320	Ceramic 0.04μF
C213	1	1	1	1	DK18403320	Ceramic 0.04μF
C214	1	1	1	1	DK18403320	Ceramic 0.04μF
C215	1	1	1	1	DK18403320	Ceramic 0.04μF
C216	1	1	1	1	DK18403320	Ceramic 0.04μF
C217	1	1	1	1	DK18403320	Ceramic 0.04μF
C218	1	1	1	1	EA10505030	Elect 1μF 50V
C219	1	1	1	1	EA10602530	Elect 10μF 25V
C220		1	1	1	EA10701030	Elect 100μF 10V
C221		1	1	1	EA10701630	Elect 100μF 16V
C222	1	1	1	1	DK16222300	Ceramic 2200pF ±10%
C223	1	1	1	1	DK16101300	Ceramic 100pF ±10%
C224	1	1	1	1	DK16102300	Ceramic 1000pF ±10%
C225	1	1	1	1	DK16102300	Ceramic 1000pF ±10%
C226	1	1	1	1	DK18403320	Ceramic 0.04μF
C227	1	1	1	1	DK18403320	Ceramic 0.04μF
C228	1	1	1	1	DK18403320	Ceramic 0.04μF
C229	1	1	1	1	EA10505030	Elect 1μF 50V
C301		1	1	1	EA10602530	Elect 10μF 25V
C302	1	1	1	1	EA22701630	Elect 220μF 16V
C303	1	1	1	1	EA33405030	Elect 0.33μF 50V
C304	1	1	1	1	EA33405030	Elect 0.33μF 50V
C305	1	1	1	1	DF15562310	Film 5600pF ±5%
C306	1	1	1	1	EA33505030	Elect 3.3μF 50V
C307	1	1	1	1	DF15152310	Film 1500pF ±5%
C308	1	1	1	1	EA47405030	Elect 0.47μF 50V
C309	1	1	1	1	EA33505030	Elect 3.3μF 50V
C310	1	1	1	1	DK16222300	Ceramic 2200pF ±10%
C311	1	1	1	1	DF15102550	Film 1000pF ±5%
C312	1	1	1	1	DF15473310	Film 0.047μF ±5%
C313	1	1	1	1	EA10505030	Elect 1μF 50V
C315	1				DF15183310	Film 0.018μF ±5%
C315		1	1	1	DF15123310	Film 0.012μF ±5%
C316	1				DF15183310	Film 0.018μF ±5%
C316		1	1	1	DF15123310	Film 0.012μF ±5%
C317	1	1	1	1	EA22405030	Elect 0.22μF 50V
C318	1	1	1	1	EA22405030	Elect 0.22μF 50V
C319	1	1	2	1	DF15182310	Film 1800pF ±5%
C320	1	1	1	1	DF15182310	Film 1800μF ±5%
C321	1	1	1	1	DD15471370	Ceramic 470pF ±5%
C322	1	1	1	1	DD15471370	Ceramic 470pF ±5%
C323		1	1	1	DF15682310	Film 6800pF ±5%, (ST520)
C324		1	1	1	DF15682310	Film 6800pF ±5%, (ST520)
C325	1	1	1	1	DF15272310	Film 2700pF ±5%
C326	1	1	1	1	DF15272310	Film 2700pF ±5%
C327	1	1	1	1	EA22505030	Elect 2.2μF 50V
C328	1	1	1	1	EA22505030	Elect 2.2μF 50V
C329	1	1	1	1	EA10701630	Elect 100μF 16V
C330	1	1	1	1	EA10701630	Elect 100μF 16V
C331	1	1	1	1	DK16102300	Ceramic 1000pF ±10%
C332	1	1	1	1	DK16102300	Ceramic 1000pF ±10%
C501	1	1	1	1	DD15220300	Ceramic 22pF ±5%
C502	1	1	1	1	DD15220300	Ceramic 22pF ±5%
C503	1	1	1	1	DK18103310	Ceramic 0.01μF
C504	1	1	1	1	EA10602530	Elect 10μF 25V
C505	1	1	1	1	DK18103310	Ceramic 0.01μF
C506	1	1	1	1	DK18103310	Ceramic 0.01μF
C507	1	1	1	1	EA22505030	Elect 2.2μF 50V
C508	1	1	1	1	DF15683310	Film 0.068μF ±5%
C509	1	1	1	1	EA10703530	Elect 100μF 35V
C510	1	1	1	1	EA10602530	Elect 10μF 25V
C513	1	1	1	1	EX47300510	Elect 0.047μF 5.5V

- (U):for U.S.A.
- (N):for Europe
- (A):for Australia
- (P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
C801	1	1	1	1	DK18103310	Ceramic 0.01μF
C802	1	1	1	1	DK18103310	Ceramic 0.01μF
C803	1	1	1	1	DK18103310	Ceramic 0.01μF
C804	1	1	1	1	DK18103310	Ceramic 0.01μF
C805	1	1	1	1	EA10803530	Elect 1000μF 35V
C806	1	1	1	1	EA10602530	Elect 10μF 25V
C807	1	1	1	1	EA10602530	Elect 10μF 25V
C808	1	1	1	1	DK18103310	Ceramic 0.01μF
C809	1	1	1	1	DK18103310	Ceramic 0.01μF
C810	1	1	1	1	DK18103310	Ceramic 0.01μF
C811	1	1	1	1	DK18103310	Ceramic 0.01μF
C812	1	1	1	1	EA47703530	Elect 470μF 35V
C813	1	1	1	1	EA10602530	Elect 10μF 25V
C814	1	1	1	1	EA10602530	Elect 10μF 25V
C815	1	1	1	1	DK18472560	Ceramic 4700pF
C816	1	1	1	1	EA22405030	Elect 0.22μF 50V
C817	1	1	1	1	DK18472560	Ceramic 4700pF
C818	1	1	1	1	EA22705030	Elect 220μF 50V
⚠C819	1	1	1	1	EA22703530	Elect 220μF 35V
⚠C820	1	1	1	1	EA10703530	Elect 100μF 35V
C821	1	1	1	1	DK18103310	Ceramic 0.01μF
C822	1	1	1	1	EA10405030	Elect 0.1μF 50V
C823	1	1	1	1	DK18103310	Ceramic 0.01μF
C824	1	1	1	1	EA10602530	Elect 10μF 25V
						P100-RESISTORS (All Resistors are ±5% and ¼W)
RA01	1	1	1	1	GD05104140	100KΩ
RA02	1	1	1	1	GD05104140	100KΩ
RA03	1	1	1	1	GD05105140	1MΩ
RA04	1	1	1	1	GD05102140	1KΩ
RA05	1	1	1	1	GD05221140	220Ω
RA06	1	1	1	1	GD05152140	1.5KΩ
RA07	1	1	1	1	GD05682140	6.8KΩ
RA08	1	1	1	1	GD05471140	470Ω
RA09	1	1	1	1	GD05101140	100Ω
RA10	1	1	1	1	GD05101140	100Ω
RA11	1	1	1	1	GD05182140	1.8KΩ
RA12	1	1	1	1	RA05020800	5KΩ(B), Trimming
RA13	1	1	1	1	GD05103140	10KΩ
RA14	1	1	1	1	GD05103140	10KΩ
RA15	1	1	1	1	GD05102140	1KΩ
RA16	1	1	1	1	GD05153140	15KΩ
RA18	1	1	1	1	GD05273140	27KΩ
RA19	1	1	1	1	GD05223140	22KΩ
RA20	1	1	1	1	GD05393140	39KΩ
RA21	1	1	1	1	GD05473140	47KΩ
RA23	1	1	1	1	GD05103140	10KΩ
RA24	1	1	1	1	GD05103140	10KΩ
RA25	1	1	1	1	GD05101140	100Ω
RA26		1			GD05104140	100KΩ, (ST530L)
RA27		1			GD05103140	10KΩ, (ST530L)
RA28		1			GD05104140	100KΩ, (ST530L)
RA29		1			GD05103140	10KΩ, (ST530L)

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
R201	1	1	1	1	GD05101140	100Ω
R202	1	1	1	1	GD05331140	330Ω
R203	1	1	1	1	GD05272140	2.7KΩ
R204	1	1	1	1	GD05153140	15KΩ
R205	1	1	1	1	GD05681140	680Ω
R206	1	1	1	1	GD05331140	330Ω
R207	1	1	1	1	GD05221140	220Ω
R208	1	1	1	1	GD05223140	22KΩ
R209	1	1	1	1	GD05331140	330Ω
R211	1	1	1	1	GD05101140	100Ω
R212	1	1	1	1	GD05223140	22KΩ
R213	1	1	1	1	GD05272140	2.7KΩ
R214	1	1	1	1	GD05332140	3.3KΩ
R215	1	1	1	1	GD05153140	15KΩ
R216	1	1	1	1	RA02030800	20KΩ(B), Trimming
R217	1	1	1	1	GD05103140	10KΩ
R218	1	1	1	1	GD05273140	27KΩ
R219	1	1	1	1	GD05104140	100KΩ
R220	1	1	1	1	GD05103140	10KΩ
R221	1	1	1	1	GD05223140	22KΩ
R222	1	1	1	1	GD05104140	100KΩ
R224	1	1	1	1	GD05473140	47KΩ
R225		1	1	1	GD05224140	220KΩ
R226		1	1	1	GD05104140	100KΩ
R227		1	1	1	GD05103140	10KΩ
R228		1	1		GD05472140	4.7KΩ
R228				1	GD05332140	3.3KΩ
⚠R229		1	1	1	GG05101140	100Ω
R230		1	1	1	GD05123140	12KΩ
R231	1	1	1	1	GD05273140	27KΩ
R232	1	1	1	1	GD05562140	5.6KΩ
R233	1	1	1	1	GD05182140	1.8KΩ
R234	1	1	1	1	GD05471140	470Ω
R235	1	1	1	1	GD05102140	1KΩ
R238	1	1	1	1	GD05473140	47KΩ
R239	1	1	1	1	GD05104140	100KΩ
⚠R301	1	1	1	1	GG05151140	150Ω
R302	1	1	1	1	RA05030800	50KΩ(B), Trimming
R303	1	1	1	1	GD05823140	82KΩ
R304	1	1	1	1	GD05102140	1KΩ
R305	1	1	1	1	GD05333140	33KΩ
R306	1	1	1	1	GD05682140	6.8KΩ
R307	1	1	1	1	RA02020800	2KΩ(B), Trimming
R308	1	1	1	1	GD05224140	220KΩ
R309	1	1	1	2	GD05272140	2.7KΩ
R310	2	1	1	1	GD05473140	47KΩ
R311	2	1	1	1	GD05104140	100KΩ
R314	1	1	1	1	GD05473140	47KΩ
R315	1	1	1	1	GD05472140	4.7KΩ
R316	1	1	1	1	GD05561140	560Ω
R317	1	1	1	1	GD05473140	47KΩ
R319	1	1	1	1	GD05392140	3.9KΩ
R320	1	1	1	1	GD05392140	3.9KΩ
R321	1	1	1	1	GD05474140	470KΩ
R322	1	1	1	1	GD05474140	470KΩ
R323	1	1	1	1	GD05274140	270KΩ
R324	1	1	1	1	GD05274140	270KΩ
R325	1	1	1	1	GD05103140	10KΩ
R326	1	1	1	1	GD05103140	10KΩ
R327	1	1	1	1	GD05103140	10KΩ

●(U):for U.S.A.
●(N):for Europe
●(A):for Australia
●(P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
R328	1	1	1	1	GD05103140	10KΩ
R329	1	1	1	1	GD05102140	1KΩ
R330	1	1	1	1	GD05102140	1KΩ
R331	1	1	1	1	GD05471140	470Ω
R332	1	1	1	1	GD05471140	470Ω
R333	1	1	1	1	GD05102140	1KΩ
R334	1	1	1	1	RA01030800	10KΩ(B), Trimming
R335	1	1	1	1	GD05104140	100KΩ
R336	1	1	1	1	GD05104140	100KΩ
R337	1	1	1	1	GD05101140	100Ω
R338	1	1	1	1	GD05101140	100Ω
R339	1	1	1	1	GD05221140	220Ω
R340	1	1	1	1	GD05221140	220Ω
R501	1	1	1	1	GD05103140	10KΩ
R502	1	1	1	1	GD05101140	100Ω
R503	1	1	1	1	GD05103140	10KΩ
R504	1	1	1	1	GD05103140	10KΩ
R505	1	1	1	1	GD05102140	1KΩ
R506	1	1	1	1	GD05102140	1KΩ
R507	1	1	1	1	GD05102140	1KΩ
R508	1	1	1	1	GD05332140	3.3KΩ
R509	1	1	1	1	GD05102140	1KΩ
R510	1	1	1	1	GD05103140	10KΩ
R511	1	1	1	1	GD05103140	10KΩ
R512	1	1	1	1	GD05103140	10KΩ
R513	1	1	1	1	GD05102140	1KΩ
R514	1	1	1	1	GD05102140	1KΩ
R515	1	1	1	1	GD05102140	1KΩ
R516	1	1	1	1	GD05473140	47KΩ
R517	1	1	1	1	GD05223140	22KΩ
R518	1	1	1	1	GD05103140	10KΩ
R519	1	1	1	1	GD05223140	22KΩ
R520	1	1	1	1	GD05223140	22KΩ
R521	1	1	1	1	GD05473140	47KΩ
R522	1	1	1	1	GD05473140	47KΩ
R524	1	1	1	1	GD05472140	4.7KΩ
R525	1	1	1	1	GD05473140	47KΩ, (ST530L)
R526	1	1	1	1	GD05473140	47KΩ, (ST530L)
R527	1	1	1	1	GD05472140	4.7KΩ, (ST530L)
R529	1	1	1	1	GD05471140	470Ω
R530	1	1	1	1	GD05473140	47KΩ
R531	1	1	1	1	GD05104140	100KΩ
R532	1	1	1	1	GD05104140	100KΩ
R533	1	1	1	1	GD05104140	100KΩ
R534	1	1	1	1	GD05104140	100KΩ
⚠ R801	1			1	GG05100140	10Ω
⚠ R801		1	1		NF02100140	10Ω
⚠ R802	1			1	GG05221140	220Ω
⚠ R802		1	1		NF02181140	180Ω
R803	1	1	1	1	GD05823140	82KΩ
R804	1	1	1	1	GD05223140	22KΩ
⚠ R805	1			1	GG05100140	10Ω
⚠ R805		1	1		NF02100140	10Ω
R806	1	1	1	1	GD05102140	1KΩ
⚠ R807	1	1	1	1	GG05561120	560Ω ½W
⚠ R808	1	1	1	1	GG05102140	1KΩ
R809	1	1	1	1	GD05333140	33KΩ
R810	1	1	1	1	GD05103140	10KΩ

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
R811	1	1	1	1	GD05473140	47KΩ
R812	1	1	1	1	GD05103140	10KΩ
R813	1	1	1	1	GD05473140	47KΩ
R814	1	1	1	1	GD05473140	47KΩ
R815	1	1	1	1	GD05103140	10KΩ
R817	1	1	1	1	GD05103140	10KΩ
R818	1	1	1	1	GD05334140	330KΩ
R819	1	1	1	1	GD05333140	33KΩ
R820	1	1	1	1	GD05103140	10KΩ
R822	1	1	1	1	GD05473140	47KΩ
R823	1	1	1	1	GD05473140	47KΩ
R824	1	1	1	1	GD05103140	10KΩ
R826	1	1	1	1	GD05152140	1.5KΩ
R827	1				RC10225920	2.2MΩ ±10% ½W
						P100-SEMICONDUCTORS
DA01	1	1	1	1	HD40002420	Varicap KV-1226
DA02	1	1	1	1	HV00006120	Varistor MV-203
DA03	1	1	1	1	HD20001000	Diode 1S1555
DA04	1	1	1	1	HD20001000	Diode 1S1555
DA05	1	1	1	1	HD20001000	Diode 1S1555
DA06		1			HD20022030	Diode DSF10C, (ST530L)
DA07		1			HD20022030	Diode DSF10C, (ST530L)
D201	1	1	1	1	HD20001000	Diode 1S1555
D202	1	1	1	1	HD20001000	Diode 1S1555
D203	1	1	1	1	HD20001000	Diode 1S1555
D205	1	1	1	1	HD20001000	Diode 1S1555
D301	1	1	1	1	HD20001000	Diode 1S1555
D501 ~ D506	6	6	6	6	HD20001000	Diode 1S1555
D508		1			HD20001000	Diode 1S1555, (ST530L)
D509		1			HD20001000	Diode 1S1555, (ST530L)
D510		1			HD20001000	Diode 1S1555, (ST530L)
D511	1	1	1	1	HD20001000	Diode 1S1555
D512	1	1	1	1	HD20001000	Diode 1S1555
D513	1	1	1	1	HD20001000	Diode 1S1555
D514	1	1	1	1	HD20001000	Diode 1S1555
D515	1	1	1	1	HD20001000	Diode 1S1555
D517	1	1	1	1	HD20001000	Diode 1S1555
D519		1			HD20001000	Diode 1S1555, (ST530L)
D520		1			HD20001000	Diode 1S1555, (ST530L)
⚠D801 ~ ⚠D810	10	10	10	10	HD20022030	Diode DSF10C
D811	1	1	1	1	HD30045090	Zener WZ-310
D812	1	1	1	1	HD20001000	Diode 1S1555
D813	1	1	1	1	HD20001000	Diode 1S1555
QA01	1	1	1	1	HF200551D0	F.E.T. 2SK55(D)
QA02	1	1	1	1	HC10058030	IC LA1245
QA03	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
QA05		1			HT409852B0	Transistor 2SD985(L or K), (ST530L)
QA06		1			HT409852B0	Transistor 2SD985(L or K), (ST530L)
Q201	1	1	1	1	HT310471C0	Transistor 2SC1047(C)
Q202	1	1	1	1	HC10033010	IC HA11225
Q203	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q204	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q205	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q207	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)

●(U):for U.S.A.
●(N):for Europe
●(A):for Australia
●(P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTON
Q301	1	1	1	1	HC10029010	IC HA11223W
Q302	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q303	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q304	1	1	1	1	HT111752D0	Transistor 2SA1175(FForEF)
Q305	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q306	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q307	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q308	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q309	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q310	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q501	1	1	1	1	HC10061060	IC MPD1704C-544
Q502	1	1	1	1	HC10030060	IC MPB553AC
Q503	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q504	1	1	1	1	HT111752D0	Transistor 2SA1175(FForEF)
Q505	1	1	1	1	HF200300B0	F.E.T. 2SK30A(Y)
Q506	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q507	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q508	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q509	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q510	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q511	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q512	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q513		1			HT111752D0	Transistor 2SA1175(FForEF), (ST530L)
Q514	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
⚠Q801	1	1	1	1	HC10077030	IC L78M15
⚠Q802	1	1	1	1	HC10107030	IC L78N06
⚠Q803	1	1	1	1	HT403131E0	Transistor 2SD313(E)
Q804	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q805	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q806	1	1	1	1	HT111752D0	Transistor 2SA1175(FForEF)
Q807	1	1	1	1	HT111752D0	Transistor 2SA1175(FForEF)
Q808	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q809	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q810	1	1	1	1	HT327852D0	Transistor 2SC2785(FForEF)
Q811	1	1	1	1	HT111752D0	Transistor 2SA1175(FForEF)
						P100-MISCELLANEOUS
A101	1	1	1	1	AV01202140	V.H.F. Tuner FE407-A12
FA01	1	1	1	1	FF10045310	Ceramic Filter SFP-450H
F201	1	1	1	1	FF11070530	Ceramic Filter SFE10.7MD-1
F202	1				FF11070530	Ceramic Filter SFE10.7MD-1
F202		1	1	1	FF11070570	Ceramic Filter SFE10.7MS3G
F203	1				FF11070530	Ceramic Filter SFE10.7MD-1
F203		1	1	1	FF11070570	Ceramic Filter SFE10.7MS3G
J101	1			1	YT01040290	Termianl, Antenna (4P)
J101		1	1		YT01050040	Termianl, Antenna (5P)
J102	1	1	1	1	YT02020400	Termianl, (2P)
J103	1	1	1	1	YT02020390	Terminal, (2P)
J104	1			1	YT02020290	Termianl, RCA Jack (2P)
J104		1	1	1	YT02020280	Terminal, RCA Jack (2P)
LA01	1	1	1	1	LO10013170	OSC Coil, MW
LA02		1			LO10013100	OSC Coil, LW (ST530L)
LA03	1	1	1	1	LA10295070	Ant. Coil, MW
LA04		1			LA10295080	Ant. Coil, LW (ST530L)
LA05	1	1	1	1	LI10013270	I.F.T. Coil, AM
L201	1	1	1	1	LI14030010	I.F.T. Coil, FM
L203	1	1	1	1	LC24750600	Choke Coil, 4.7mH
L204		1	1	1	LS27025010	M.P.X. Coil

●(U):for U.S.A.
●(N):for Europe
●(A):for Australia
●(P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
SA01		1			AZ04240010	Solenoid Switch, MW/LW
S301	1	1	1	1	SS02020730	Slide Switch, Scan Step
X501	1	1	1	1	XB108001L2	Crystal, 4.5MHz
						PS00-POWER SWITCH CIRCUIT BOARD
PS00	1	1	1	1	YK438H1440	P.W. Board, Power Switch
	1	1	1	1	ZZ438H1440	P.W. Board Assembly
⚠CS01	1	1	1		DK18472840	Ceramic Cap. 4700pF
⚠CS01				1	DK18103850	Ceramic Cap. 0.01μF 250V
⚠SS01	1	1	1	1	SP01010650	Push Switch, Power
						PT00-TACT SW./PRESET IND. CIRCUIT BAORD (ST530, ONLY)
PT00	1	1	1	1	YK438H1420	P.W.Board,Tact Sw./Preset Ind.
	1	1	1	1	ZZ438H1420	P.W. Board Assembly
						(ST530L, ONLY)
PT00		1			YK438H1420	P.W.Board,Tact Sw./Preset Ind.
		1			ZZ439H8420	P.W. Board Assembly
DT01	1	1	1	1	HI10004080	L.E.D. SEL1124R, 1
DT02	1	1	1	1	HI10004080	L.E.D. SEL1124R, 2
DT03	1	1	1	1	HI10004080	L.E.D. SEL1124R, 3
DT04	1	1	1	1	HI10004080	L.E.D. SEL1124R, 4
DT05	1	1	1	1	HI10004080	L.E.D. SEL1124R, 5
DT06	1	1	1	1	HI10004080	L.E.D. SEL1124R, 6
DT07	1	1	1	1	HI10004080	L.E.D. SEL1124R, 7
DT08	1	1	1	1	HI10004080	L.E.D. SEL1124R, 8
DT09	1	1	1	1	HI10024080	L.E.D. SEL1210S, Program REC
DT10	1	1	1	1	HI10024080	L.E.D. SEL1210S, MODE
DT11	1	1	1	1	HI10052020	L.E.D. LN250RPH, MEMORY
ST01	1	1	1	1	SP01010570	Push Switch, 1
ST02	1	1	1	1	SP01010570	Push Switch, 2
ST03	1	1	1	1	SP01010570	Push Switch, 3
ST04	1	1	1	1	SP01010570	Push Switch, 4
ST05	1	1	1	1	SP01010570	Push Switch, 5
ST06	1	1	1	1	SP01010570	Push Switch, 6
ST07	1	1	1	1	SP01010570	Push Switch, 7
ST08	1	1	1	1	SP01010570	Push Switch, 8
ST09	1	1	1	1	SP01010570	Push Switch, MEMORY
ST10	1	1	1	1	SP01010570	Push Switch, FM
ST11		1			SP01010570	Push Switch, MW(ST530L)
ST12		1			SP01010570	Push Switch, LW(ST530L)
ST13	1	1	1	1	SP01010570	Push Switch, UP
ST14	1	1	1	1	SP01010570	Push Switch, DOWN
ST15	1	1	1	1	SP01010570	Push Swtich, SCAN
ST16	1	1	1	1	SP01010570	Push Switch, REC
ST17	1	1	1	1	SP01010570	Push Switch, REC MONITOR
ST18	1	1	1	1	SP01010570	Push Switch, MODE
ST19	1	1	1	1	SP01010570	Push Switch, AM (ST530)
WT01	1	1	1	1	YU04120260	Jumper Lead, (4P)
WT02	1	1	1	1	YU04180260	Jumper Lead, (4P)
WT03	1	1	1	1	YU07180260	Jumper Lead, (7P)

- (U):for U.S.A.
- (N):for Europe
- (A):for Australia
- (P):for PX

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
						PR00-DISPLAY CIRCUIT BOARD (ST530, ONLY)
PR00	1	1	1	1	YK438H0410	P.W. Board, Dispaly
	1	1	1	1	ZZ438H0410	P.W. Board Assembly
						(ST530L, ONLY)
PR00		1			YK438H0410	P.W. Board, Display
		1			ZZ439H0410	P.W. Board Assemlby
						PR00-CAPACITORS
CR01	1	1	1	1	DA17103010	Ceramic 0.01μF
CR02	1	1	1	1	DA17103010	Ceramic 0.01μF
						PR00-RESISTORS
RR01	1	1	1	1	GD05681140	680Ω ±5% ¼W
RR02	1	1	1	1	GD05681140	680Ω ±5% ¼W
RR03	1	1	1	1	GD05681140	680Ω ±5% ¼W
						PR00-SEMICONDUCTORS
QR01	1	1	1	1	HC10077060	IC μPD6320G
VR01	1	1	1	1	HQ30902060	Display Unit, 7B8S (ST530)
VR01		1			HQ31001060	Display Unit, 7A9S (ST530L)
						PR00-MISCELLANEOUS
JR01	1	1	1	1	YJ06002440	Jack, (4P)
JR02	1	1	1	1	YJ06002430	Jack, (3P)
JR03	1	1	1	1	YJ06002450	Jack, (6P)
WR01	1	1	1	1	YU04240260	Jumper Lead, (4P)
WR02	1	1	1	1	YU03180260	Jumper Lead, (3P)
WR03	1	1	1	1	YU06140260	Jumper Lead, (6P)

REF. DESIG.	Q'TY U	N	A	P	PART NO.	DESCRIPTION
						PX00-SIGNAL STRENGTH METER CIRCUIT BOARD
PX00	1	1	1	1	YK438H1430	P.W. Board, Signal Strenght Meter
	1	1	1	1	ZZ438H1430	P.W. Board Assembly
						PX00-RESISTORS
RX01 ~ RX05	5	5	5	5	GD05561140	560Ω ±5% ¼W
						PX00-SEMICONDUCTORS
DX01	1	1	1	1	HI10011080	L.E.D. Signal, 1
DX02	1	1	1	1	HI10011080	L.E.D. Signal, 2
DX03	1	1	1	1	HI10017080	L.E.D. Signal, 3
DX04	1	1	1	1	HI10017080	L.E.D. Signal, 4
DX05	1	1	1	1	HI10017080	L.E.D. Signal, 5
DX06	1	1	1	1	HI10011080	L.E.D. Stereo
QX01	1	1	1	1	HC10008370	IC TL489
						PX00-MISCELLANEOUS
WX01	1	1	1	1	YU04120260	Jumper Lead, (4P)

(WO1-99)	Assembly and Wiring
(TO1-99)	Adjustment
(XO1-00)	Correction

NOTE ON SAFETY:
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

17. TECHNICAL SPECIFICATIONS

FM TUNER SECTION

Frequency Range		87.5 ~ 108 MHz
Usable Sensitivity		
Mono	S/N 26 dB, 75 ohms	0.7 μV
Stereo	S/N 46 dB, 75 ohms	22 μV
Alternate Channel Selectivity 98 MHz		70 dB
Image Response Rejection		78 dB
IF Rejection		85 dB
Spurious Response Rejection		95 dB
AM Suppression		50 dB
Signal-to-Noise Ratio		
Unweighted	Mono	78 dB
	Stereo	70 dB
Weighted	Mono	80 dB
	Stereo	72 dB
Pilot Signal & Subcarrier Rejection		
19 kHz		65 dB
38 kHz		65 dB
Total Harmonic Distortion		
Mono		0.1%
Stereo		0.2%
Frequency Response		
30 Hz ~ 15 kHz		+0 dB, −1.5 dB
Separation		
Stereo		50 dB
Channel Balance		0.2 dB

MW TUNER SECTION

Frequency Range	522 ~ 1611 kHz
Usable Sensitivity 20 dB S/N 30% Mod., 999 kHz	350 μV/m
Selectivity 999 kHz, ±9 kHz	60 dB
Image Rejection, 999 kHz	45 dB
IF Rejection, 999 kHz	70 dB
Signal-to-Noise Ratio, 999 kHz	54 dB
Total Harmonic Distortion, 999 kHz	0.3%

LW TUNER SECTION

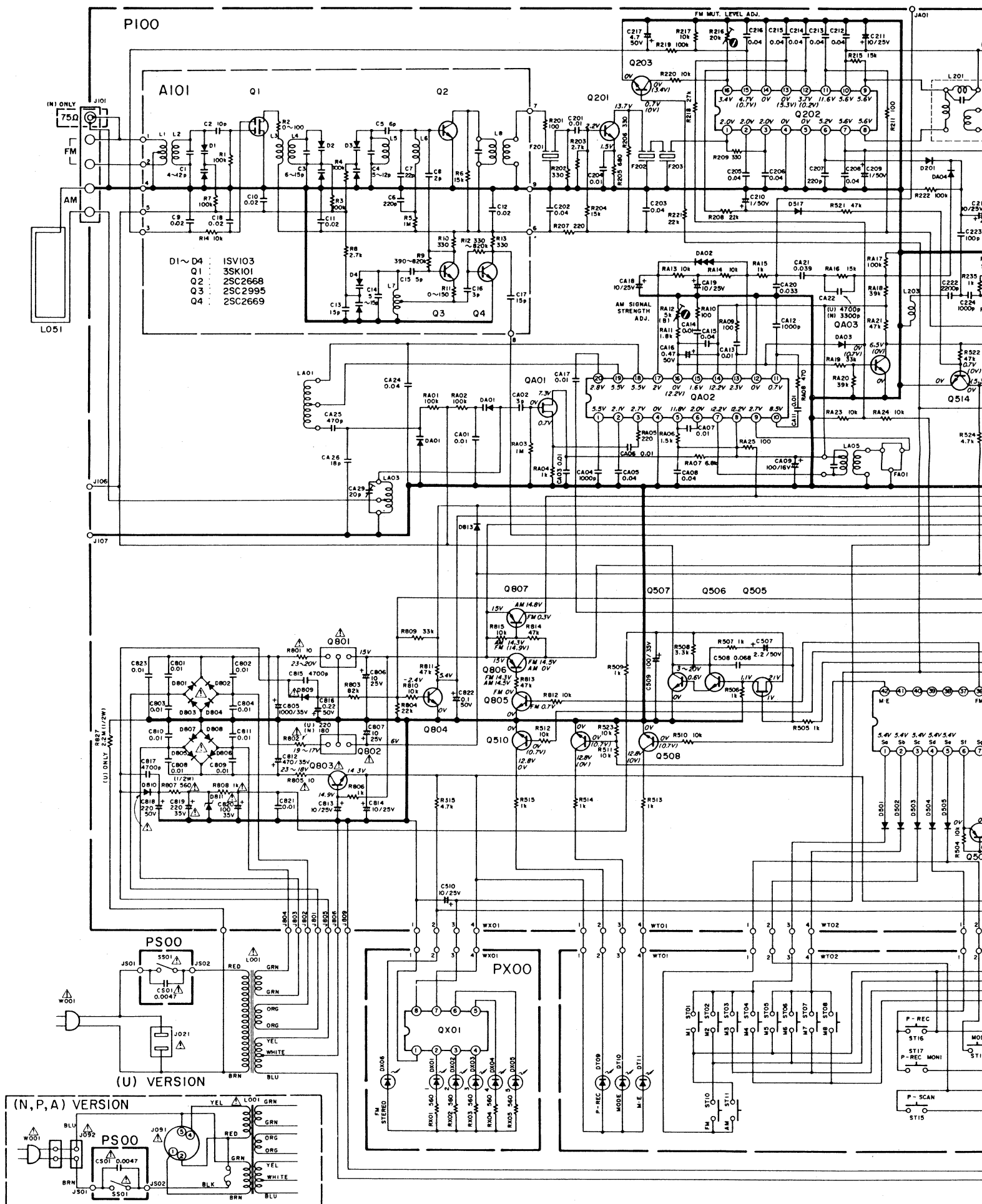
Frequency Range	153 ~ 353 kHz
Usable Sensitivity 20 dB S/N 30% Mod., 254 kHz	700 μV/m
Image Rejection, 254 kHz	50 dB
IF Rejection, 254 kHz	60 dB
Signal-to-Noise Ratio, 254 kHz	54 dB

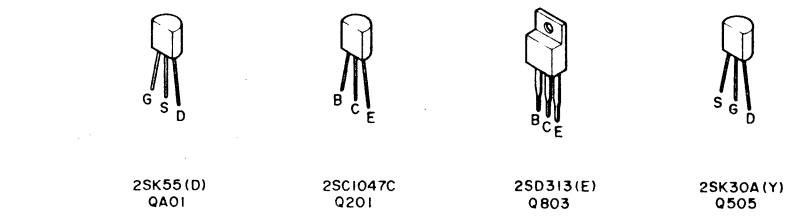
GENERAL

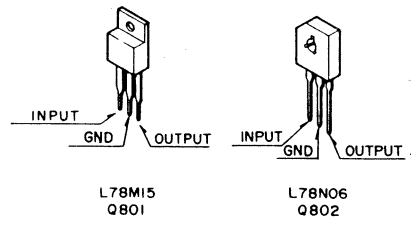
Power Requirements (ST530)	110–120/220–240V AC, 50/60 Hz
(ST530L)	220–240V AC, 50/60 Hz
Power Consumption	12W
Dimensions	
Panel Width	416 mm
Panel Height	50 mm
Depth	300 mm
Weight	
Unit Alone	3.0 kg

Specifications and appearance are subject to change for modification without notice.

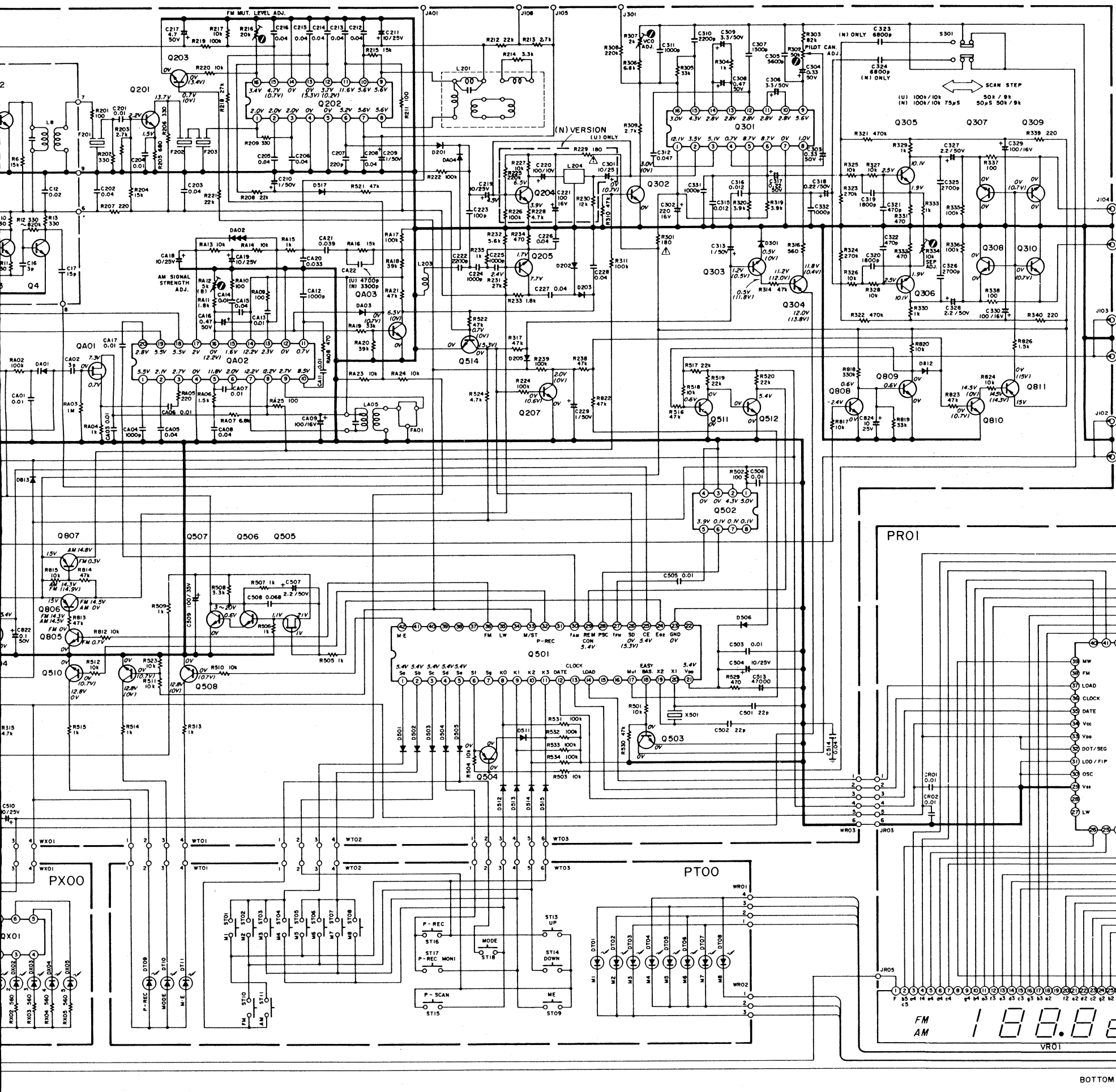
18. SCHEMATIC DIAGRAM







NOTE ON SAFETY :
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.



QA01
HF200551D0
2SK55(D)

QA02
HC10058030
LA1245

Q201
HT31047IC0
2SC1047C

Q202
HC10033010
HA11225

Q301
HC10029010
HA1223W

Q501
HC10061060
μPD1704C-

Q502
HC10030060
μPB553AC

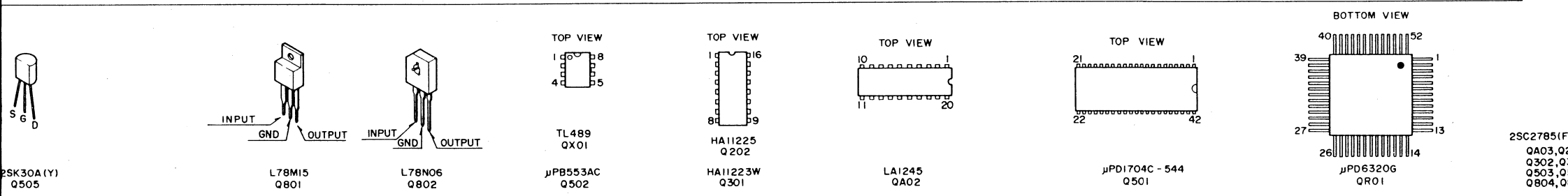
Q505
HF200300B0
2SK30A(Y)

Q801
HC10077030
L78M15

Q802
HC10107030
L78N06

Q803
HT403131E0
2SD313(E)

QA03, Q203
Q302, Q303
Q503, Q506
Q804, Q805
HT327852D0
2SC2785(F



2SK30A(Y)
Q505

L78M15
Q801

L78N06
Q802

TL489
QX01

μPB553AC
Q502

HA11225
Q202

HA1223W
Q301

LA1245
QA02

μPD1704C-544
Q501

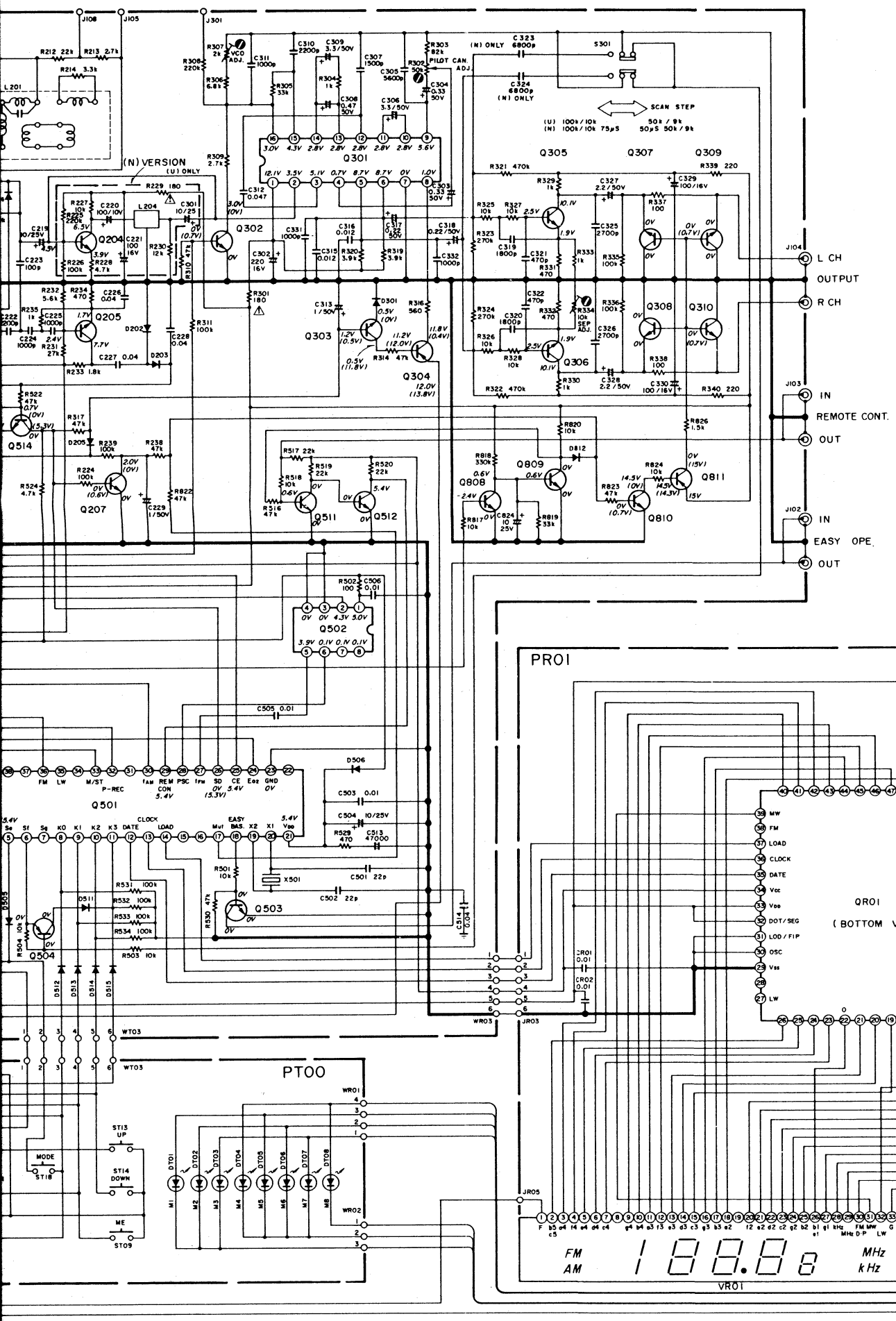
μPD6320G
QR01

2SC2785(F
QA03,Q2
Q302,Q3
Q503,Q
Q804,Q

original parts
symbol ⚠.
han original
hock hazard.

Components and wiring are subject to change for modification without notice.

Model ST530



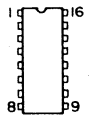
BOTTOM VIEW

QA01 HF20055IDO 2SK55(D)	Q304, Q504, Q806, Q807, Q811 HTIII752DO 2SAII75 (FF, EF)	D801~D810 HD20022030 DSFI0C
QA02 HCI0058030 LAI245	QR01 HCI0077060 μPD6320G	DA03~DA05 D201~D203 D205, D301 D501~D506
	QX01 HCI0008370 TL489	D511~D515 D517, D812 D813 HD20001000 ISI555ETC IS2473
Q201 HT3I047ICO 2SCI047C		
Q202 HCI0033010 HAII225	DA01 HD40002420 KV-1226	
Q301 HCI0029010 HAII223W	DA02 HV00006120 MV-203	
Q501 HCI0061060 μPDI704C-544	D811 HD30045090 WZ-310	
Q502 HCI0030060 μPB553AC	DX01, DX02, DX06 HI10011080 SELI213C	
Q505 HF20030080 2SK30A(Y)	DX03~DX05 Hi10017080 SELI413C	
Q801 HCI0077030 L78MI5	DT01~DT08 Hi10004080 SELI124R	
Q802 HCI0107030 L78N06	DT09, DT10 Hi10024080 SELI210S	
Q803 HT403131E0 2SD313(E)	DT11 Hi10052020 LN250RPH	
QA03, Q203~Q205, Q207 Q302, Q303, Q305~Q310 Q503, Q506~Q512, Q514 Q804, Q805, Q808~Q810 HT327852DO 2SC2785(FF, EF)		

TOP VIEW

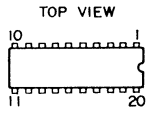
TL489
QX01

TOP VIEW



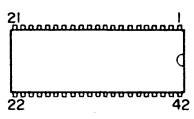
HAII225
Q202

TOP VIEW



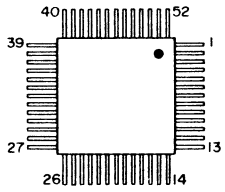
LAI245
QA02

TOP VIEW

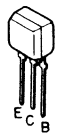


μPDI704C-544
Q501

BOTTOM VIEW



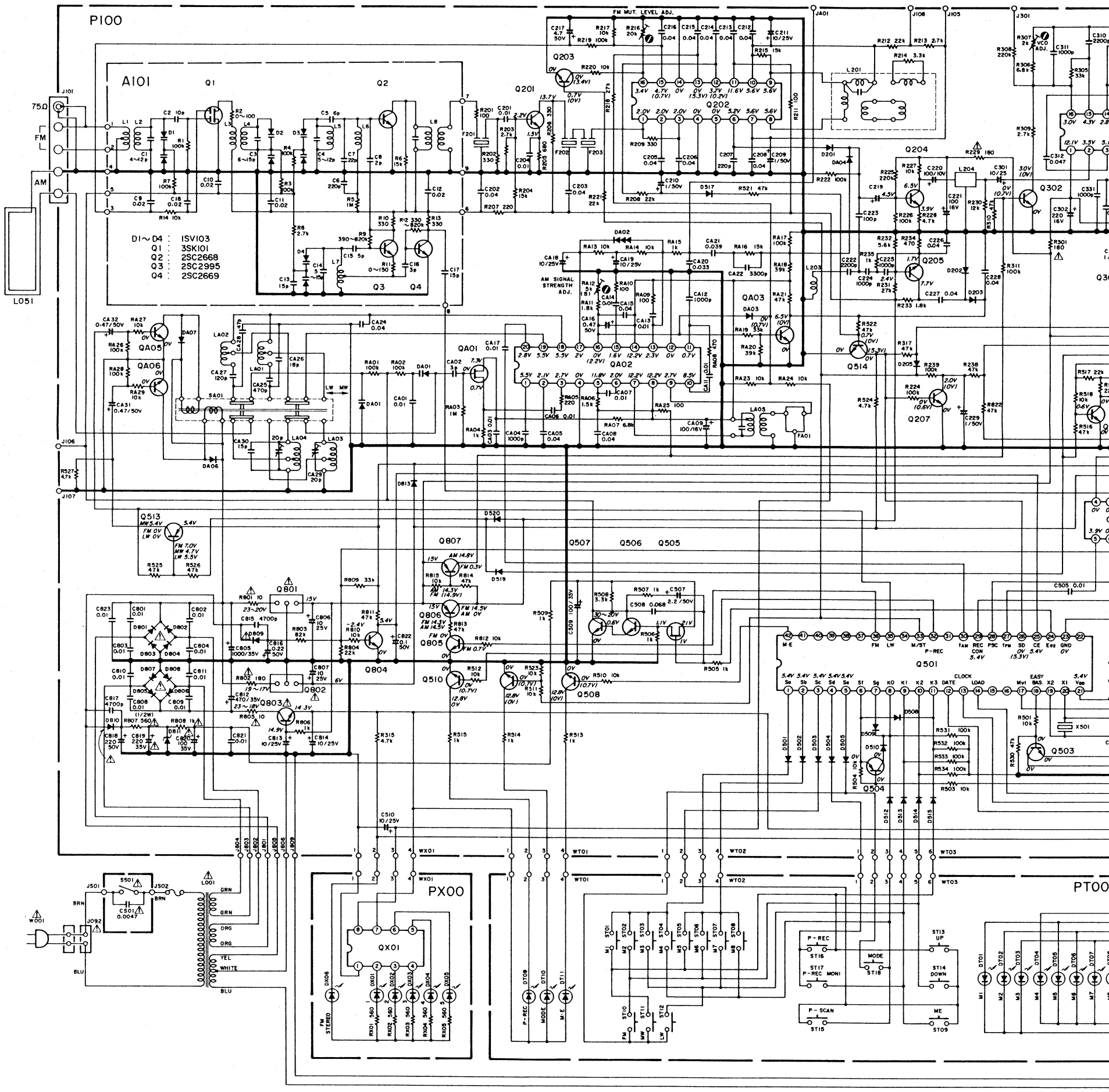
μPD6320G
QR01



2SC2785(FF, EF)
QA03, Q203~Q205, Q207
Q302, Q303, Q305~Q310
Q503, Q506~Q512, Q514
Q804, Q805, Q808~Q810

2SAII75(FF, EF)
Q304, Q504, Q513
Q806, Q807, Q811

Components and wiring are subject to change for modification without notice.



NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

QA01
HF20055IDO
2SK55(D)

QA02
HC10058030
LA1245

QA05, QA06
HT409852BO
2SD985(L,K)

Q201
HT310471CO
2SC1047C

Q202
HC10033010
HA11225

Q301
HC10029010
HA11223W

Q501
HC10061060
μPD1704C-544

Q502
HC10030060
μPB553AC

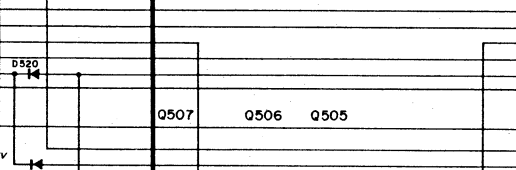
Q505
HF200300B0
2SK30A(Y)

Q801
HC10077030
L78MI5

Q802
HC10107030
L78N06

Q803
HT403131EO
2SD313(E)

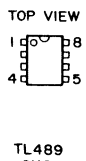
QA03, Q203 ~ Q205, Q2
Q302, Q303, Q305 ~ Q3
Q503, Q506 ~ Q512, Q5
Q804, Q805, Q808 ~ Q8
HT327852DO
2SC2785(FF, EF)



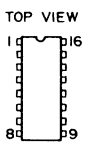
2SD985(L,K)
QA05,QA06

L78MI5
Q801

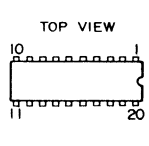
L78N06
Q802



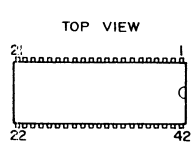
TL489
QX01



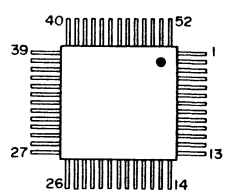
HA11225
Q202



LA1245
QA02



μPD1704C-544
Q501



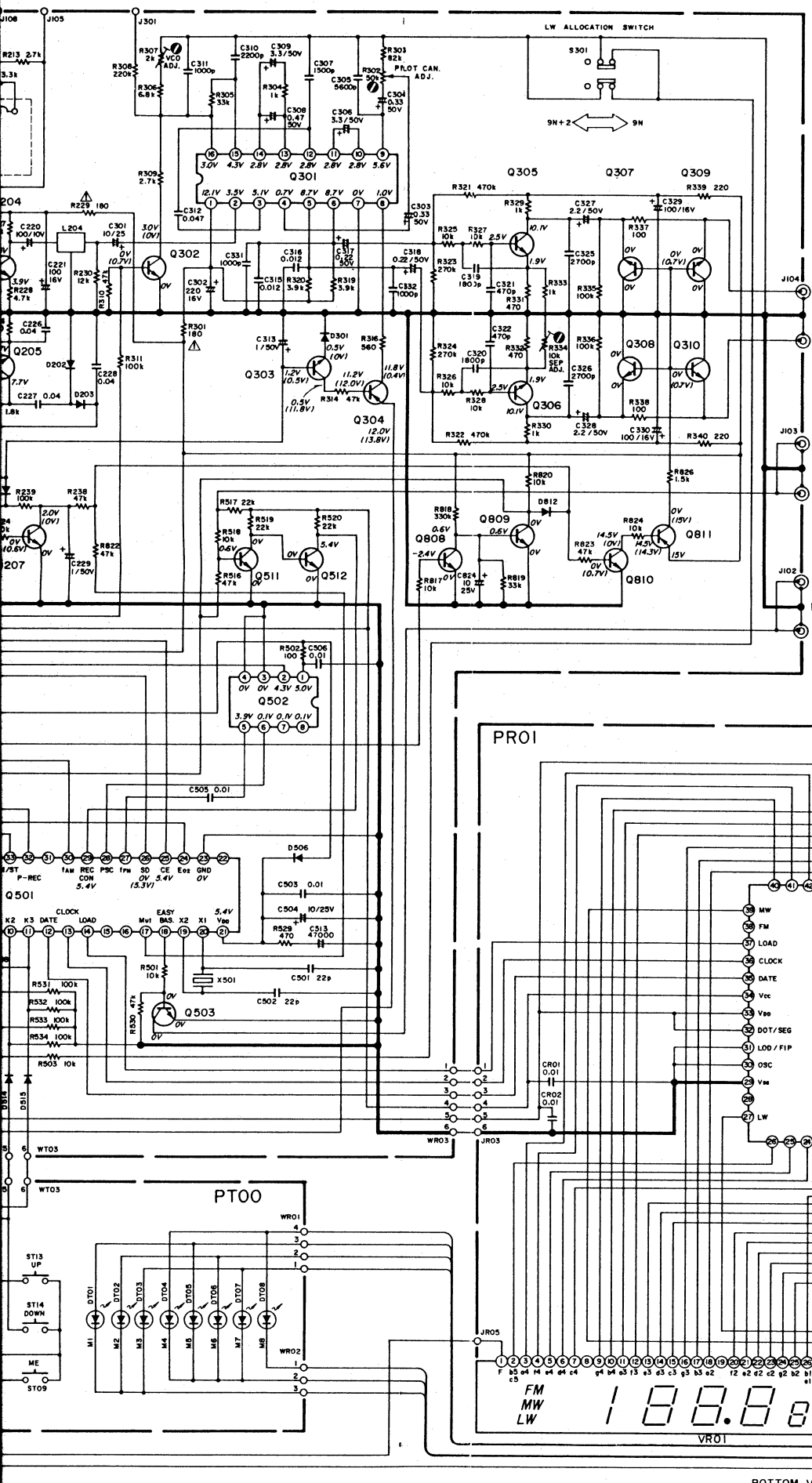
μPD6320G
QR01

2SC2785(FF,EF)
QA03,Q203 ~ Q205,Q
Q302,Q303,Q305 ~ Q
Q503,Q506 ~ Q512,Q
Q804,Q805,Q808 ~ Q

hazard. Only original parts
t marked with symbol ⚠.
tion (other than original
or electrical shock hazard.

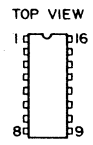
Components and wiring are subject to change for modification without no

Model ST530L



QA01 HF20055ID0 2SK55(D)	Q304, Q504, Q513 Q806, Q807, Q811 HT1111752D0 2SA1175 (FF, EF)	D801 ~ D810 DA06, DA07 HD20022030 DSF10C
QA02 HC10058030 LA1245	QR01 HC10077060 μPD6320G	DA03 ~ DA05 D201 ~ D203 D205, D301 D501 ~ D506 D508 ~ D510 D512 ~ D515 D517, D519 D520, D812 D813 HD20001000 IS1555ETC IS2473
QA05, QA06 HT409852B0 2SD985(L, K)	QX01 HC10008370 TL489	
Q201 HT31047IC0 2SC1047C		
Q202 HC10033010 HA11225	DA01 HD40002420 KV-1226	
Q301 HC10029010 HA11223W	DA02 HV00006120 MV-203	
Q501 HC10061060 μPD1704C-544	D811 HD30045090 WZ-310	
Q502 HC10030060 μPB553AC	DX01, DX02, DX06 HI10011080 SEL1213C	
Q505 HF20030080 2SK30A(Y)	DX03 ~ DX05 HI10017080 SEL1413C	
Q801 HC10077030 L78M15	DT01 ~ DT08 HI10004080 SEL1124R	
Q802 HC10107030 L78N06	DT09, DT10 HI10024080 SEL1210S	
Q803 HT40313IE0 2SD313(E)	DT11 HI10052020 LN250RPH	
QA03, Q203 ~ Q205, Q207 Q302, Q303, Q305 ~ Q310 Q503, Q506 ~ Q512, Q514 Q804, Q805, Q808 ~ Q810 HT32785ID0 2SC2785 (FF, EF)		

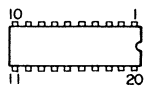
TOP VIEW



HA11225
Q202

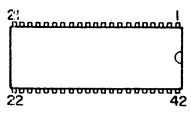
HA11223W
Q301

TOP VIEW



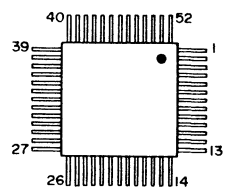
LA1245
QA02

TOP VIEW



μPD1704C-544
Q501

BOTTOM VIEW



μPD6320G
QR01

2SC2785(FF, EF)
QA03, Q203 ~ Q205, Q207
Q302, Q303, Q305 ~ Q310
Q503, Q506 ~ Q512, Q514
Q804, Q805, Q808 ~ Q810

2SA1175(FF, EF)
Q304, Q504, Q513
Q806, Q807, Q811

Components and wiring are subject to change for modification without notice.